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PRINCIPLES OF
TEACHING AND LEARNING
IN THE ELEMENTARY SCHOOL

AN INTERPRETATION OF MODERN SCHOOL PROCEDURES IN THE LIGHT OF OUR PRESENT KNOWLEDGE OF THE LAWS OF LEARNING

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INTRODUCTION

New responsibilities for the schools. It is a commonplace to note that profound changes have taken place in living conditions and problems within the last half-century. It is likewise a commonplace to state that new functions and responsibilities are placed upon the schools to adjust their work to the larger needs. But, notwithstanding the platitudinous character of these observations, the work of the schools responds to the changing conceptions and expanding needs but partially and slowly.

With only rare exceptions, leading thinkers in education maintain that the schools should assume large responsibilities for the growth of pupils in qualities of good citizenship, in capacity for straight thinking about the affairs and problems of everyday life, in creative and constructive abilities, in a knowledge of such scientific and social facts and conceptions as contribute to practical efficiency in living, and in such appreciation of the cultural assets of life, æsthetic and social, as may contribute to the wholesome use of leisure and the healthy interpretation of life purposes and activities. In assuming these responsibilities for the schools, there is no thought of substituting them for the responsibilities of teaching the conventional tools or instruments of modern life — reading, writing, spelling, language forms, and number. These, of

course, the schools must continue to teach. But the new responsibilities are given large place with the assumption that the formal techniques should be learned in relationship to the life activities and purposes which they serve. The new and growing conception would thus make all school education fundamentally and vitally moral, would have it all woven into the fabric of life for the integration and guidance of behavior in the achievement of all worthy purposes.

Because of the highly organized and machine-controlled conditions of homes and occupations, it is no longer possible for children to learn much by direct participation in most of these activities. The school must take responsibility for teaching all that is desirable that cannot be taught by other agencies; but affording the means for such growth in schools is far from general in practice. Still prevails the determination of promotion upon the basis of performance in the formal subjects and those depending primarily upon verbal memory. Still persists the one-standard of promotion in these subjects as organized in courses of study adapted to children of a little more than average ability in verbal memory and abstract thinking. Resulting from this attitude are emphasis upon the formal, little provision for activities utilizing other abilities, little learning of life's important enterprises by participation, and large numbers of non-promotions through failure. Many children fall farther and farther behind the grades representing their age-groups, and many are eliminated from school in early

adolescence who have had very little opportunity to learn anything desirable within the range of their abilities. In two state-wide surveys of elementary education within two years, the number of children failing of promotion at the close of the school year was 16.3 per cent in one and 11.2 per cent in the other. The percentages of children one year or more over-age in these States were respectively 27.7 and 27.4. In a third state survey of 1925, the reported percentages for these facts of failure and over-age were about as high. Many children who do not fail just barely succeed in passing. The work is a constant strain for such pupils and they find no joy or stimulation in it. Manifestly the materials of the courses of study and the methods of teaching are not adapted to the abilities of nearly all of the children. In many schools there is relatively little that fulfills the requirements of the conception of learning by living. The conditions of failure and over-age found in the three States cited are probably fairly representative for the whole country.

This new conception represents a higher level and an altogether more comprehensive range of purposes than the conception that dominated a generation or two ago. Its purposes cannot be achieved by the same kinds of courses of study nor by the use of the same methods.

Difficulties in adjusting to the new conception. The interpretation of the larger conception of education in terms of school practice reveals needs for new content and new teaching techniques. The relative

simplicity of the selection and organization of formal subject matter to be learned has to give way to the selection of materials and activities that are more natural, yet more complex as to organization and treatment. Mere assignment of lessons in books, holding pupils to the study of such assignments, and testing them upon results are not at all adequate as method. New techniques and procedures have to be developed in accordance with new purposes and new content. The very conception of what we mean by "learning" has changed. Learning includes an integration of new facts, processes, and meanings with one's ways of behaving. It includes activities with whatever is new in such forms of experience and usage that the new becomes organically built into one's behavior tendencies. Taking anything new into memory only, or developing a habit or skill separate from any experience requiring its usage is not enough. The symbols and processes of reading are only learned, in this new, inclusive sense, when they are mastered as part of a total process in interpreting thought, feeling, or action in response to a desire or need to know what is portrayed in the reading material. The facts of geography or history are not learned as affecting one's thought, feeling, or action in life situations unless they are approached or considered as parts of some question or problem which they help to explain or interpret. Whatever is learned that influences and determines behavior in any of its aspects must be learned through its use in specific activities in which it enters as a

contributing part. Learning together those elements which should go together has long been recognized as good psychology, but we have been slow, indeed, to provide conditions of learning that would utilize this principle. We have been content to try to store the memory with facts and processes dissociated from activities representative of the normal activities of child life, and of the child's participation in adult life. It is the activities themselves which must be experienced — "learned" — together with all that contributes to initiating them, evaluating them and carrying them forward to successful completion. Not only information or "subject matter," but controlled purposing and selective thinking, judgments of worth, attitudes, and appreciations should be developed together in relationship to specific activities to which they all contribute. To provide situations, conditions, problems, questions, stimulations, and opportunities for the use of school facilities and environing resources which afford experiences in learning to do those things which it is worth while to do, with the help of all that race experience can contribute, is not a simple matter. To point the way and to indicate the means for school practice which will afford the opportunity for such natural and wholesome growth is the purpose of this book.

Some one has portrayed the situation of a hungry rat in a complex maze with a piece of cheese outside. He has asked the question, "What is the urge that drives the rat to activity, to learn the maze or to get

the cheese?" Have not our schools somewhat duplicated this situation, but without the "cheese"? Is it a desire for facts, techniques, skills, and attitudes that furnishes the "drive" in learners, or is it a desire to engage in many satisfying activities, physical, intellectual, and emotional? So put, the question seems to be absurd, the answer is so self-evident. Yet the schools still tend to omit the activities which the learners want, and to try to teach the isolated facts for which the learners have no sense of want or need, and little sense of their worth when they are forced to work upon them. By this unnatural procedure, the schools fail to teach many of the kinds of activity which constitute the real business of living. We sometimes wonder why our people are not more self-dependable, self-directive, self-reliant, law-abiding, coöperative, honest, efficient, and generally intelligent and moral. We wonder why their tastes in literature, art, music, and other forms of recreation or amusement are low. We wonder why they do not have higher ideals and more lofty ambitions and aspirations. But why should we expect more satisfying results when the schools afford children such meager opportunities for learning these qualities by practicing them? Only as the pupils are given abundant participation in living these traits with that success and satisfaction which make their further experience an object of desire may we say that the children are learning them. What we do we learn — learning is the outcome of doing.

Working principles to realize the larger vision. Professor Mossman has here indicated the principles of the new conception of learning and the procedures by which they may be made operative in teaching. That it is practically possible to conduct school life in accordance with the principles of wholesome growth and development has been demonstrated for a quarter of a century in a few well-known private schools, and more recently in many private schools and in a number of public schools with large classes and other conditions less favorable than those of the most progressive private schools. Professor Mossman has kept in view primarily the work of the public schools, but she has endeavored to interpret conceptions and principles as they universally apply, whatever the type of school as to support. It is a treatment from which the teacher may derive immediate helpful stimulation and guidance, whether he be a teacher of many years of experience, a beginning teacher, or a student preparing to enter the teaching field. The principles presented and the practice suggested are in harmony. Both are in accordance with the best we know of educational psychology, sociology, and philosophy. The book goes forth with no effort spared to make it educationally sound and practically helpful. Teachers may use it with the confidence that it will contribute to their growth and through them promote the progressive growth of their children. With the spirit of adventure and the promise of larger efficiency inherent in the newer conception of education, there

should come greater satisfaction and greater joy to both teachers and pupils in the wholesome buoyancy of continuous and abundant growth.

FREDERICK G. BONSER

PREFACE

The present educational situation is peculiarly puzzling to those who are responsible for classroom instruction. They have seen that research workers are contributing findings which condemn many school practices once acceptable. They have realized that the rapid changes in social life have made some things, once important, now useless. They have felt that some educational leaders are modifying their beliefs as to the function of a school, the nature of its process, the work of the teacher, the significance of the environment, and the importance of growth in the learning process. They know that many things, once taught in school, are now questioned or condemned. The result is that they feel a need for suggestions as to how to proceed in their immediate work with children.

It is recognized that the agencies which have brought about these changes are still active. More changes will come as more evidence is produced by our research leaders. Different emphases will be made as educational leaders still further help us to evaluate the factors in the process of guiding children's growth in school. Any statement as to proposed procedure must in time need modification. To formulate suggestions now as to how to teach boys and girls means to work with factors that are changing, but such suggestions

have a place if they prove helpful to teachers, for the boys and girls who now are in school must be cared for. They have a right to the best we know.

It is with the spirit of interpreting school procedure in the light of present findings and evaluations that the following pages have been written. The author has been privileged to study under some of the great teachers in education. She has come in contact with the work of some superior teachers of children. She has been fortunate in knowing many who are sympathetic and discriminating students of child life and child learning. Out of this wealth of contacts she has been formulating a point of view that seems to be in accord with the science and philosophy of education. These pages are the result of such experiencing and thinking. They are offered with the thought that they may meet some immediate needs of teachers and may, in a measure, promote interest in further progress.

In the light of our present knowledge of the learning process, we must conclude that the surest mode of learning a thing is through experience. We learn what we do and we learn when we do. Living, then, is the medium of learning. Richness, fullness of living, mean richness and fullness of learning. An ideal program of learning is a program of living each day to the fullness of one's capacity. Each day's efficiency brings the vision of the next day's possibilities and the means and abilities for meeting the demands of the new day. As such living is guided into desirable richness in this day-by-day living, one comes in time to

maturity, accustomed to habits of meeting life's demands with efficiency and richness of meaning.

Thus we conclude that the method of living and learning wisely in school is the method of developing desirable learnings in children.

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TEACHING AND LEARNING IN THE ELEMENTARY SCHOOL

CHAPTER I

ORGANIZING THE CLASSWORK ON THE BASIS OF GROUP LIVING

Preparation for the opening of school — The schoolroom decorations — An alternative procedure — Setting up objectives — Guides to objectives — Making the program — The emphasis in the program — Classroom living — Two sorts of activities — Determining activities — Who makes the decisions? — Criteria for evaluating activities — Suggestions relative to activities — Interactions with other groups — Evidences of worthy class living — Control of conduct — Method of living.

Summary — Suggestions for thought and discussion.

Preparation for the opening of school. The teacher's preparation for the opening of school implies the employment of many of the same attitudes and methods as are used by thoughtful parents in setting up living in a new home, or by a camp leader in opening a summer camp in preparation for the arrival of the young campers.

The teacher of a class of first-grade children will find it profitable to spend much of the week preceding the opening of school in preparation for the coming of the children. She should, if possible, have a list of the names of the children who are coming, and she

should prepare for them with attention to them as individuals. She distinguishes, in the equipment of the room, the individual from the common possessions. This distinction she hopes the children will gradually acquire as they learn their responsibilities in group living.

In the cloak-room she assigns to each child his particular space. This assignment is made by labeling the space with his name. If the classroom has individual lockers, she makes similar assignments there. If the room has desks, these are assigned. Changes in the arrangement may occur later as the group living develops, but order in beginning is furthered by such preliminary assignments. Similarly personal possessions, such as boxes of crayolas, are labeled. One can readily see the individual reading problem with which each child is confronted on the first day of school because of the labeling, since few children, if any, can recognize their names in print.

The arrangement of the room likewise receives the teacher's attention. What furniture and equipment there are in the room should be arranged in as attractive a way as possible. The room may have a small table which can be made into a library table. On it should be placed such books as the room affords, and as have an appeal to children who have not yet learned to read. These books are made largely of pictures which contain the much-loved nursery rhymes, Mother-Goose stories, and kindred themes. The pictures tell the story, and the legends underneath the

pictures tempt the children to venture into reading as words begin to be known. The right placing of this library table in the room so as to catch the attention of the children, and the attractive arrangement of the books on the table so as to tempt the children to use them, are obvious but important tasks of the teacher in preparation for the opening of school.

The schoolroom decorations. Another responsibility is to decide upon the wall decorations. It is a mistaken notion to assume that the decoration of the school wall should be standardized or fixed. In its flexibility it may become a means of giving tone to the schoolroom atmosphere, and of expressing the attitudes and purposes of those living there. The teacher should, as a continuous practice, conserve from all resources available a variety of pictures, illustrations, and hangings which may lend themselves to the various phases of school living which may develop. Out of such a storehouse she should make careful selection of things appropriate to the opening of school. The theme of any picture selected should be one that will attract the interests of little children, coming fresh from the freedom of outdoor life in the summer. The pictures should be simple and childlike in theme, and they should be few in number. They should be hung where little children can easily see them. Any other hangings should be simple and unobtrusive, designed primarily to add color. They should belong to child life.

Provision should be made for flowers in the room.

It is highly desirable that the room afford a choice of vases of kinds appropriate to varying flowers — large and small, coarse and delicate, pink, red, and violet. Out of such opportunity for choice children may learn many lessons about line and color. For the opening of school the teacher should plan that there be some flowers to lend attractiveness to the children's new home. Later the responsibility for such decoration should be shared by the children.

The arrangement of flowers in the vase, and the placement of this vase, constitute a significant thing. Skill in fitting vases to the flowers, and in arranging both in the room, greatly enhance the attractiveness of a room. Children should in time learn this art, and it would seem that they learn such an art best when living with those who appreciate it.

After arranging the room as attractively and as conveniently as is possible, the teacher should decide upon the things that will be necessary for the children to do the first day. A simple program may be made and put in a convenient place.

An alternative procedure. One very fine third-grade teacher believes that the room arrangement, contents, and decorations are the expression of the living that is there taking place. She therefore begins school with only the room and its bare necessities by way of desks, tables, and chairs. As the weeks go by, the room becomes more and more a reflection of the living process there. With children who have had a year or two in which to learn that school is a place

where one can live fully, such preliminary preparations in the nature of assignments as have been suggested for a first grade may not be needed. It may, in fact, be more profitable to do as this third-grade teacher does in leading the children to shape their own schoolroom environment.

Whatever the grade, the teacher must, in her preparation, think in terms of the essentials of group living already listed, and must plan her work so that the opening of school in her room is truly the setting up of a living program.

Setting up objectives. Any group which attempts to live together, whether the group be a family, a camp, a school, or a religious organization, must, if it would succeed, determine definitely the objectives for which it is living. The more clearly its members understand these objectives, the more definitely will unified effort be put forth.

First-grade children can state what they see that they should do in the course of the year. One class of the author's acquaintance did state the things they wanted to do, and the teacher put these statements on a chart. One item was the fact that they wanted to learn to read. At the close of the year the parents came to see the results of the year's work. This chart was posted on the wall. By the side of it was one made by one of the children which read, "We all wanted to learn to read. We all can read."

The following is a list of objectives as formulated by one third grade, under the guidance of their teacher:

Read many books
Improve our spelling
Learn new songs
Work with wood
Make clay bowls
Improve our arithmetic
Give a play
Improve our art work
Make a yearbook
Improve our manuscript writing
Paint at the easel
Study geography
Have a story-hour club
Write stories
Write poems
Have a neat room
Study history
Have class meetings
Learn about maps
Go to the wholesale market
Have a newspaper
Have a library

The following year, under another teacher, these same children formulated these objectives:

Use clay and wood
Cook
Make booklets
Dye cloth
Study maps
Have class meetings
Study Greek mythology
Study silk
Know more about scientific facts
Write compositions
Keep a class museum
Have a library
Paint on the easel
Make our own room attractive
Improve our singing
Study history
Have a story-hour club
Make greeting cards
Keep a diary
Learn to use the dictionary
Have a class directory
Take trips
Have tests
Study bees
Have a play
Write poems
Keep a bulletin board
Continue manuscript writing
Improve our drawing
Have free work periods
Care for our Christmas family
Study geography

Making such a list of objectives implies a very wholesome pupil-teacher relationship. It implies a teacher who is skilled in helping children to see possibilities in their year together. The list, made at the beginning of the year, should be modified and extended as experience in the group living reveals new and better possibilities. If the statement of objectives is kept where the class can refer to it frequently, it furnishes an effective criterion for the group to use in evaluating

an individual's suggestions, and in judging the worth of work done by the group and its individuals. The formulation of objectives carries with it an implication of responsibility for results. The teaching of such responsibility is no mean art.

Guides to objectives. How may a teacher guide children toward good objectives? What criteria can she use to secure a statement of objectives which will call for a wholesome well-balanced living? Such living may well include:

1. A health objective, such as attention by the children to the weight and height of each in order to keep themselves up to standards. This means attention to the laws of health in living.

2. An efficiency objective, such as attention to the school techniques and skills of reading, spelling, and number processes to keep each one efficient in such skills. This means definite learning of these techniques, including drill where needed.

3. An inquiring objective, to strive to find out, to the children's satisfaction, the answers to the puzzling questions which confront them. This means learning how to solve challenging problems, and it means forming the habit of attacking them.

4. An æsthetic objective, striving to become better acquainted with music, literature, and art, so that they can better respond to the art products that touch their lives. This means learning to know and like music, literature, and art products.

5. A play objective, to provide for recreation and

proper use of leisure. This means giving some school time to play.

6. A social-service objective, in which the children definitely attempt to do for those who will not in any way return the service. This is an attempt to express the value of a margin in living. This means that the class will engage in some forms of activity which reach out into the larger community.

Making the program. A well-organized camp finds it necessary to live by schedule. A well-regulated family schedules its daily living so as to take account of the recurring necessities of living, and thus should a school do. The difficulty in the past has been due to two main causes: (1) to the fact that the program was one of *re*-citing lessons, and not a program of *doing things together;* and (2) to the fact that the children had no part in making the program, and therefore obviously no responsibility based upon genuine interest in carrying it out. When children have stated the objectives of their year together, then they are ready to do their best in making a program designed to enable them to accomplish their ends.

The traditional program has been one of the teacher's series of duties in "*hearing*" lessons. Children, if permitted to be sincere, will be more likely to formulate the program in terms of periods of time set aside for *doing* the various things that are to be done by themselves. The "doing" periods would probably include setting aside:

1. Time for the group to confer relative to the state

of the enterprises in which they are engaging, and to decide upon the things they should do next. This is clearly a class meeting, or conference period.

2. Time to acquire techniques, skills, and knowledges needed in carrying on their work. This is clearly drill or practice time.

3. Time to solve their challenging questions. This time is to be devoted to the acquirement of problem-solving techniques, and to the use of them. This is obviously a period in which data are used in thinking through difficulties.

4. Time to enjoy something in the fields of music, literature, and art.

5. Time to do creative and constructive work.

6. Unassigned time when children individually or in small groups may do the things for which they are responsible to the entire group, or for which their individual interests are demanding further time.

7. Time for recreation and play.

The emphasis in the program. Such scheduling will take care of the sorts of values contained in the traditional subjects, but it places the emphasis upon the functional learning of them. The children learn the subjects in relationship to the things they are doing. Drill includes getting skills through practice in reading, spelling, music techniques, language forms, use of reference facilities, use of number — all of the techniques making for efficiency. Problem solving is with reference to challenging questions in science, history, geography, industry — any aspect of living conditions.

Time devoted to æsthetics will give acquaintance with music, literature, and art products, with increasing ability to enjoy them. Time devoted to health and recreation will promote physical well-being.

There are schools at present where the terminology used in making the program is significant because of the attitude of the parents. In such a school the patrons would be restless under a new naming of periods. The terminology used, however, is not of such significance as is the children's attitude toward the use of the time. If the children look upon these periods as valuable because thus is given time to accomplish their ends, the names of the periods may be immaterial. The important thing is to enlist the children's efforts in so managing their school time that they may use it wisely. Responsibility for use of time, with skill in so doing, is the thing to be learned.

Such a point of view relative to the function of a program implies a flexibility in its use. It should be modified at any time when so doing will further the work.

Classroom living. When the objectives have been set up by the class and a program has been made, what then happens? Obviously, if the objectives are genuine, if the children sincerely want to accomplish them, they will plunge into carrying them into execution.

One may see a similar plunging into action if he watches a group set up camp living. Having established the objectives of the camp, formulated a work-

ing program, and moved in, what then do they do? The only reasonable answer is that they proceed to live there. This living consists: (1) in meeting the demands of the routine necessities, and (2) in taking advantage of every promising lead that the camp situation offers. The environment has many lures which tempt the campers. They bring to the camp a readiness for just such stimuli. Hiking, swimming, hunting, exploring, berrying, experimenting are obvious things to do in such a stimulating environment.

These activities cannot be followed successfully, however, if the routine, daily necessities are neglected. The demands for food, sleep, cleanliness, order, rest, play, and recreation all alike must be met. Otherwise the individuals will not be fit for the life the camp environment makes possible. Some skills are needed for the enterprises contemplated. They may be lacking. If so, the individuals must acquire these with as much expedition and efficiency as possible. The zeal in seeking mastery of a skill bears some relation to the immanence of its assumed value in functioning in camp life. The worth of the camp experience is dependent upon the variety and richness of the activities in which the members engage, and this is conditioned by the efficiency with which they meet the necessities and realities of living there.

Two sorts of activities. Similarly, a class in school has two sorts of activities in which it engages just as soon as it begins to be a class in that room.

First, there are the necessities inherent in being

there together. Personal possessions, such as wraps, lunches, and books must have attention. Common possessions must be looked after to keep them usable and available. Numbers in the room involve situations which must be met. Order and method are essential if the individuals do things together. Regulation of talking and moving about is essential if anything is to be accomplished. Neatness and attractiveness in the room are desirable to make working there more satisfying. The very situation of being there in that room together involves some realities which must be recognized and met if the enterprise of being a class succeeds.

Second, the fact that they are a group of individuals banded together with some agreement as to objectives likewise offers some possibilities. As the children become aware of these possibilities, enterprises will be initiated. When they find that their number includes some who are clever in dramatization, or ingenious in constructing experimental apparatus, or original in story-writing or in composing poems, or skilled in tool processes or in column addition, or efficient in summarizing things clearly or in making diagrams to set forth data, they gather confidence in launching enterprises which involve these abilities. When they realize that their numbers include individuals who are resourceful in experimentation or in gathering pertinent data, or who have vivid imaginations, or who are painstaking workers, or who are skilled in some forms of athletics or in some forms of music, or who know how

to decorate a room or make costumes — when, in fact, they come to know their possibilities, they are ready with many proposals of things to do.

As the work gathers impetus, more and more awareness is gained of the possibilities in the environment for achieving the objectives set up. The materials in the vicinity take on much suggestiveness as to the things that can be done. The library comes to mean a mine of wealth in gathering the data they need. Newspapers and magazines take on new significance. The storms, the soil, the rocks, the streams, the community activities, the public buildings, the water system, the flowers, the birds, the customs and costumes of the people, the stores, the means of travel and communication, all come to offer challenges to growing, active children because of the new meanings which are revealed as one becomes acquainted with their possibilities.

Determining activities. When it comes to deciding upon the activities in which a class shall engage, two apparently diverse values must be met.

First, the individuals must be considered. Each must have opportunity to develop the possibilities in him. To fail to do this would be to rob the individual of something which is his inherent right.

Second, the good of the whole also must be considered. To allow the time of all the class to be used upon an enterprise in which only one, possibly a dominating personality, is particularly interested would be obviously unfair and a waste. The question

then becomes: How are the activities in which the class engages to be determined in fairness to the individuals and to the group?

If the enterprise is rich in diversity of possibilities, it has in it an important reason for commending it to the group consideration. If it contains many and varied sorts of activities that give promise that they will challenge varied members of the group, each to put forth his best efforts, then it may be expected to promote the growth of all the members of the group. One answer to the dilemma seems to lie in selecting the kind of group activity which offers great promise in the richness and diversity of its challenge.

If a class has set up its objectives in working and living together, these become excellent criteria by which to evaluate any proposal for class action. Does the thing proposed give promise of carrying us ahead in accomplishing our ends? Such criteria should preclude any chance that an individual's suggestion may unfairly become a class enterprise.

Who makes the decisions. Who shall decide upon what is to be attempted? Surely the ones who are to do the work, if it is to be well done. This does not mean that the things attempted are subject to whims or to the caprice of the moment. If the right sort of group consciousness is developing, there is a serious purpose to accomplish the ends already agreed upon. There is a growing sense of responsibility upon the part of the children to use their time and opportunity wisely. They come to value what is provided for

their living and working together. Furthermore, the group consciousness developing should come more and more to imply a sense of responsibility for accomplishing the things that they attempt. A commendable pride in what they can do should naturally accompany growing consciousness of power to do. Such a sense of responsibility will tend to check sporadic proposals of enterprises which are trivial or unworthy. Group consciousness of needs, interests, and possibilities will prevent acceptance of a proposal peculiarly appropriate to only a part of the class.

The leadership and influence of the teacher are here needed in helping the children to consider both the individual and the group welfare in deciding what they are to do. Learning to make wise decisions is of supreme value, and these wise decisions are typically found in activities which give promise of richness and diversity of experience. Then can each individual contribute his part to the group achievement, and at the same time he can push his own ability and experience farther.

Criteria for evaluating activities. There are so many things that a group of children may do together that the teacher may easily be in doubt as to which are the better. Children of much initiative may propose many activities, some of which may be uncertain in their educative value. How shall the teacher know which to encourage? Since she is responsible for teaching children how to choose wisely the enterprises in which they engage, it follows that the teacher her-

self must have some standards by which to guide her own evaluation of the proposals offered. She must know how to recognize the worthy activity. She must be able to see the educational possibilities in what is attempted.

The following criteria for evaluating activities may be helpful in judging their educational value:

1. *Is the proposed activity related to the present living experience of the children?* There is economy in carrying on an activity at the time when it is associated with the child's vital experiences. This is but following the psychologist's advice [1] to put together the things that belong together.

2. *Does the proposed activity give promise of outcomes relatively valuable in life now?* If learning comes through living, and if fullness of living is the goal as well as the method of the school, only such activities as promise genuine values in living now can be considered.

3. *Is the experience involved socially constant or socially variable?* If we want the kind of living in school to be typical of living in general, we obviously should prefer experiences which are similar to those of life in general. For this reason, experiences, for example, leading into understandings of how people live and what people do, and of how food, clothing, and shelter needs are met, are valuable in an educative program.

4. *Will the activity give fuller meaning to the experi-*

[1] Thorndike, E. L.: *Principles of Teaching*, p. 110.

ence of the child in this particular environment? As will be shown in Chapter II, one of the essential factors in a learning situation is the stimulus to action. The environment constitutes the sum of the stimuli outside of himself to which the child is responding or to which, if properly guided, he may respond. Education should guide the responses so that they may be selective toward the more desirable learnings, and its guidance should include getting fuller meaning out of the responses being made. It is fair to judge the educational progress of a class by the amount of added meaning which increasingly attaches to the environment in which the class is living. Stones, trees, clouds, soils, flowers, factories, peoples, buildings, storms, streets, books — all that make up the child's world should in the course of school life gradually take on added meaning.

5. *Are the fields of subject matter involved worth while and representative of the big aspects of life?* This calls for ability on the part of the teacher to differentiate the trivial from the vital. Relative values in terms of life meanings are involved. Areas of the world's surface where much of the history of the race has been lived, events in human life which have brought progress because of the achievements made, the literature which interprets vital human experiences, and science which explains significant phenomena, all are units of desirable subject matter. Choose such activities as will involve the use of such subject matter.

6. *Will this work contribute to some of the larger*

essential goals of education? If it does not promise outcomes making for better health, wiser use of leisure time, finer habits and attitudes in living with people, greater efficiency in doing what one must do in the routine of life, aid in attempting new enterprises, and finer ideals in living — if it does not give promise of contributing to some of these goals, it is scarcely worthy of a place in a worthy school.

7. *Is it hard enough to challenge?* If there is no challenge in the activity, the child will not make great effort with it. A program of doing less than one's best does not give promise of large growth. Too many teachers who have attempted to organize work around children's activities have erred here in that they have confused interest and ease of execution, failing to see the necessary factor of challenge.

8. *Is it easy enough to insure some degree of success?* On the other hand, effort ending in failure produces annoyance which is not conducive to learning. A nice balance between this and the preceding criterion calls for the teacher's knowing child interests and abilities.

9. *Is it more difficult than any previous undertaking in this sort of enterprise?* Increase in efficiency is evidenced by ability to succeed in enterprises which become gradually more difficult. Zest in achievement is furthered by a consciousness that each enterprise is reaching into experiences beyond any previous ones. A worthy program of activity should show an increment in growing difficulty. This means growth

in power to do and growth in power to grasp something of the significance of living. Each enterprise should leave the child equipped to attempt the next enterprise it calls for.

10. *How often and how recently have similar activities been experienced?* Children of different experiences respond differently to a given situation. A child of five years is likely, when in possession of some cotton bolls or some clay or some cloth or some time to play, to see quite different things to do from the things a child of twelve will propose to do with similar equipment. The child of five should not be expected to exhaust the possibilities of any one of these. Clay or cotton bolls or play time can mean quite different things, too, to children who have differing degrees of experience. It follows that a thing may be studied more than once in the course of a child's school experience. How often it may be studied depends upon the possibilities it offers for growth. Consideration of the use of wool is much more revealing of the growth of human achievement than is that of the use of hemp. Wool lends itself to many sorts of activities of children, varying in the resulting outcomes in conduct. Hence we might find first-grade children engaging in activities involving the use of wool. After they have grown older they may be interested in wool for very different reasons. A second consideration of wool implies an interval in which there is growth of new interests and new abilities to do.

11. *Will the activity contribute to the child's efficiency?*

Perhaps not every enterprise need do so, but, when one considers the wide range of efficiencies a child needs to develop, it seems reasonable to weigh a proposed activity in terms of its promise of developing efficiency. Will it promote ability to read, to express one's ideas in forceful language, to weigh data, to be resourceful in meeting difficulties, to locate material relevant to a challenging question, to do creative work, to think through a difficult situation, to meet quantitative situations, to use the library facilities, to choose suitable line and color?

12. *Will it teach children method in ordering their experiences?* Control of conduct by the children themselves is the goal of education. Conduct in group living involves method in securing group action while at the same time enabling each individual to be a growing and self-directed personality. Ability in living together and controlling such living can come only by attempting to order the details of thus living while help is available in guiding the efforts put forth. A teacher needs to recognize the difference between managing a group, and helping and guiding a group in its own efforts to do things together. A desirable undertaking involves the glimpsing of the next step.

13. *Will it develop relationships leading to organization of experience?* Some forms of growth are in some way related to intellectual curiosity. The one who is trying to find out is the one who is putting forth the effort which will lead him into new experiences, into ranges of living not before attempted. Fullness of

living for each individual demands this. The progress of society is furthered by just such an investigative attitude. The school should foster such tendencies. Enterprises which include possibilities of this kind are to be encouraged. Group living should further each individual's opportunities "to realize the possible within him lying."

14. *Will it provide opportunities for learning to coöperate in living?* An enterprise, offering diversity of tasks needed to carry it to completion, gives opportunity for the individuals in the group each to make his contribution to the group achievement. Thus do they learn to value the ability of each member, and the importance of combining effort in order to achieve results. As the individual sees his work valued by the group because of its worth in achieving the end, he gains a measure of self evaluation which may in turn cause him to seek added abilities and efficiencies.

15. *Did it come out of something in the children's previous experience?* The conditions of readiness for any activity grow out of the successes and satisfactions in some previous experience or experiences. Anything in which children engage should be traceable to something which has already come into their living. The source may not necessarily have been a definite group enterprise. Group living implies sharing, pooling experiences, coöperating in undertakings. Such a method of sharing may mean that individuals may propose undertakings suggested by experiences they have brought to the group from other situations and, be-

cause the shared experience and the proposal suggested by it may give promise of furthering a group objective, the class may decide to undertake the thing suggested. Such an activity is traceable then to the group method of sharing experiences and to the objectives of the group previously established.

16. *Will it lead to something of larger worth? Of increasing richness?* If there is no promise of such possibilities, the enterprise is doubtful as a means of producing growth. The new enterprise should take the children into greater reaches than any previous experience has done.

17. *Is it related to other activities in which the children are engaging?* The opportune time for doing a thing is the time when interest is keenest. It is well then to guide the work so that related enterprises are, if possible, carried on together. This makes for economy of time and for increased interest. At the time it promises learnings with more life connections. Such relationship is an advantage, but lack of relationship is not necessarily prohibitive.

18. *Is it practicable under school conditions?*

19. *Are the materials and helps needed available?*

20. *How fully can the activity be carried out?* It should not be attempted if there is no promise of success. It is better to wait until a time when greater maturity will give the satisfaction that comes with successful effort, for learnings follow only with satisfaction in effort. If the difficulties are to arise, they should be foreseen in time to prevent failure.

21. *How much time will it consume?* A teacher should develop in children a sense of responsibility in using their time. They should learn to look ahead before attempting a thing, and estimate its worth in terms of probable time needed. The teacher certainly needs to see the time elements in an enterprise before it is undertaken.

Suggestions relative to activities. What will the children and the teacher do in their thus living and doing together? Of what will their work consist? It is difficult to make a definite answer that will apply to children of all ages, and of varying environments and experiences. Differences in age, past experience, community influences, and individual tendencies will mean differences in activities. Suggestions only can be made, suggestions made after observing the work of numbers of children who have attempted coöperative enterprises, and after considering the tendencies and needs of growing children.

There are the things children need to do in adjusting to one another. They need to differentiate individual rights and possessions. They need to recognize ways of regulating and using common possessions. They need to organize the physical conditions to fit their needs. They need to keep their room and environs suitable to their convenience. They need to plan things they can do. They need to know individual aptitudes and possibilities. They need to devise ways of sharing materials and experiences. They need bulletin boards, and committees to care for them.

They need library tables or shelves, and committees to regulate the use of the books. They need time and opportunity to enjoy the books and magazines, individually and together. This means some sort of story hour or library club.

The children need to learn how to articulate in the environment. The physical conditions should take on meanings — meanings far in advance of those which come by chance contacts. Their curiosity about the causes of these conditions needs to be satisfied. The whys about waterfalls, clay beds, stratification, frost, rainfall, and erosion should have careful consideration. The closed doors of factories should no longer symbolize ignorance about what is taking place within the factory walls. Cotton processes, glazing, bookbinding, clay manufacturing, lumber milling, and iron-foundry processes will take on meaning if children's curiosity about what people do is but satisfied. The farm, the dairy, the city water system, and the fire department are challenging to child life, and offer valuable returns where activities are directed toward articulation with them.

The world of affairs is likewise challenging. Newspapers, magazines, and news-reels offer much to stimulate child imagination. The school work may be so directed as to seize upon these momentary interests and guide them into interests of more permanent social value.

Interactions with other groups. The life of a given class of children will of necessity have interaction with

other groups of people. These contacts may be very fruitful in social meanings and learnings. Sharing with other school groups, participating in community enterprises, and rendering service in places where no material returns can be expected, all call for activities of a kind which can be of great value.

As group consciousness develops, group self-respect and pride will demand an increasingly higher level of efficiency in performing the tasks involved in their enterprises. The situation will increasingly demand greater ability in reading, spelling, number computation, penmanship, map-reading, use of library and reference material, and kindred abilities. Such demands will call for definite effort to improve abilities and techniques. Part of the time in group living should be frankly set aside for meeting these demands. Time spent in such enterprises may be most profitably spent.

Recording worthy experiences and sharing them with others call for class papers, or yearbooks, or magazines. Letters of exchange with other children, and programs in chapel, entertaining others with the fruits of their enterprises, will naturally follow richness in doing. Mothers may be entertained as well as informed by a program giving a résumé of work attempted.

Club organization for focusing reading, art, or music interests, a class daily or weekly or monthly paper, excursions to points of interest related to the objectives of the group, definite time set aside for inquiry about

the world of affairs to-day and for the purpose of getting understanding about how present modes of living came to be, attempts at experimentation for better understanding of natural laws, efforts to master the techniques and skills needed in enterprises undertaken, time to get acquainted with the beautiful in literature and music and art, opportunity for creative effort and reflective thinking, genuine play and recreational activities — all these suggest the sorts of things the boys and girls will attempt in a school where there is freedom to be their best selves.

Evidences of worthy class living. From consideration of criteria for judging activities one comes to a formulation of some judgments as to the worth of the class living engaged in. Worthy living is evinced by growth in ability to coöperate, increasing efficiency in performing the necessary tasks involved in community living, greater mastery of the tools and facilities of social life, greater interest in the life about one, greater intellectual curiosity, a growing disposition to get at the meanings of experience, greater sensitivity to the æsthetic aspects of living, and increasing social consciousness.

Control of conduct. This is the goal of education. By means of guided living the child is enabled gradually to get control of his conduct, so that he is able to meet each situation with efficiency. Until a child is able to control his conduct he must have help to prevent his activities from ending in disaster. Some have interpreted the child's inability to manage his conduct

as implying adult management and dictation. So we have had a theory of dictated control. The difficulty in this method of securing control is that it makes no provision for learning control through the child's responding to those factors in social living which of necessity shape conduct.

Social control is a force which affects conduct wherever we find people living together. What the child needs is a simplified social living which the school can provide. In this he exercises all the control he is able to manage in responding to the demands of this group living. The teacher is there to help him to learn how to meet these social demands, and how to control his conduct. To dictate control may result in superficial evidences of what appears to be self-control, but such a method is based upon response to teacher dictation and not upon response due to sensitivity to social control. A method of learning in group living offers the possibility of learning desirable control of conduct on the part of each member of the group.

Method of living. The sort of living here postulated involves a method of coöperating; pooling and sharing experiences, materials, and ideas; deciding, planning, evaluating, and judging together; conferring, reporting, and discussing — in fact, a method where each individual contributes all he can to the group enterprises, and in return enriches his own experiences in living through the richness which comes when many diverse experiences are combined. In such a method each may learn what he can do, and what value others

place upon his efforts. He will seek to become more efficient because of the proved worth of efficiency in group living.

Summary. A teacher should plan to begin her school in the way that will best further the setting up of a program of learning in group living. Wise leadership will guide the children in setting up worthy objectives, in making a workable practicable program for accomplishing these objectives, and in entering upon a series of activities that will attain the desired objectives. Guidance of this work demands that the teacher have a definite set of criteria for evaluating proposed activities to the end that she may keep the work educative, such as will promote the best possible growth of the children. Suggestions relative to kinds of activities are helpful in keeping the teacher alert to possibilities. The results of the work should be continuously evaluated in terms of worthy class living and in increasing gain on control of conduct on the part of individuals. Such individual control in fruitful group living will be characterized by a spirit of coöperation in all that is done.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. List the common possessions in a given classroom. List the individual possessions.
2. What suggestions can children make as to provision for better care of these possessions?
3. What educative value is there in making book shelves or library tables for the classroom? Shall children use school time in making these?

4. What learnings take place when one class entertains another with a program?
5. State a principle which will guide a teacher in differentiating those things children should do in caring for the room and those things which should be left to the janitor to do.
6. List those activities which a class can profitably carry on throughout the year. List some which would be appropriate for only a part of the year.
7. Make a program of the school day in a given class, stating each period in terms of what the children think they are doing.
8. Secure copies of several class programs. Study these to find how much time the children can give to:
   a. Planning class enterprises.
   b. Permitting each individual to carry forward his own ideas.
   c. Practice upon individual needs in the school skills.
   d. Engaging in creative thinking and doing.
   e. Comparing their ideas and plans with those of other people.
   f. Reading to satisfy individual interests.
9. How much of the school day of a given class provides practice in the children's learning to decide what they should do? How much in learning to follow directions of others? What is the optimum division of time between these two sorts of learning?
10. How many life situations call for uniform responses to counts or signals? How many call for individuality in responding? Is the school adequately meeting the needs for each kind of response?
11. Observe children occupied with blocks, moldolith, cut-up pictures, parquetry materials, colored sticks, clay, and paper and paste. Evaluate each activity by the criteria listed. What proportion of such work do you judge to be educative?
12. List all the things a given class does in a week in learn-

ing to read. Apply criteria 7 and 9 to each of these.

13. Study four or five activities of classes you know. Acquaint yourself with the details of their enterprises. Find out how the work started. What caused the children to decide upon these enterprises? What had gone on previously which enabled the children to see the values of these? What abilities do the children need to carry these enterprises through successfully? Do the children have such abilities? Where did they acquire them? What enterprises do you see that should or could follow these? What abilities are they acquiring in these now which will be needed in the new ones you suggest?

CHAPTER II

THE NATURE OF LEARNING

How a boy learns to drive a car — Essential factors in learning — How some children learn to dance — The prevalence of informal learnings in living — The occasion of formal learnings — New agencies for informal learnings — The learning process — Inborn tendencies and learned responses — Laws controlling learning — Other factors involved in the learning process — The number of learning responses in a given situation — The stream of learning — Kinds of learnings.

Summary — Suggestions for thought and discussion.

How a boy learns to drive an automobile. Did you ever see some one teaching a growing boy to drive an automobile? How many of the boys whose fathers own cars and keep them in repair could now, without any further learning, drive an automobile if the law permitted such driving? How did these boys learn to drive? When you say they "picked it up," just what do you mean? What in the environment stimulated them to want to drive? What in their own natures found a ready response to these stimuli? How did they find out what to do in driving? What induced the fathers to permit the boys to try driving in the yard? Why was such limited practice so effective in producing the learning? What were the satisfiers which fixed the learning?

Essential factors in learning. The contemplation of these questions leads us to note certain essential factors in this learning:

1. The *environment* is very stimulating to a boy toward interest in driving a car. His father owns a car. The boy rides in it. He sees many other people driving cars, and frequently he makes and hears comparisons and comments. As an integral part of his environment, *the pattern, or way of doing* the driving, has been *vividly* before him ever since his father bought the car. He has proudly sat in the front seat and watched his father's every movement.

2. The boy's *impulsive tendencies* are alert to opportunities for riding in a car, for handling machinery, and for being a cause of something that happens.

3. The *satisfactions* in trying to drive are obviously present, because: (*a*) the car goes and stops at the command of the boy's movements; (*b*) he sees himself clearly as the cause of the movement of the car; (*c*) his father, mother, or younger brother is almost certain to commend his achievement; and (*d*) he comes to regard himself with greater respect because he thus learns to know that he can do.

4. *Something is learned.* He has learned to drive the car, as a result of the stimuli of the environment; a response which it is probable that he will make whenever opportunity offers. To learn to drive a car is a *part of his curriculum of life*, as he sees it.

How some children learn to dance. Did you ever watch a group of children at play in a poor section of the city? For the want of any other place they are playing in the street. The hurdy-gurdy man is heard coming around the corner. Instantly they drop their

game and begin dancing to the music of a hand-organ. Their delight in the melody and their response to the rhythm are a joy to see. Who taught these children to dance? The street has been their teacher and their dancing school. In a real sense we may say "they picked it up."

Examination of the factors involved in the way these children learned to dance may again be helpful in understanding how learning takes place.

The first factor to be considered is the *environment* which encourages or stimulates the children to dance. The music of the hurdy-gurdy man is very potent. His smiles of encouragment add to the impetus of the music. Then, the children encourage one another because they normally tend to do what is popular with the group. Further, the older people about them hum the melody, smile approval, or make comments that further the action. In such a community the dance is the thing. Tradition sanctions it. The selection from the opera, which is played, is very familiar, and is associated with the dance in the community.

The pattern or way of doing is likewise provided by the environment. The children, by example, teach one another. Now and then an elder illustrates by a few steps which he seems unable to repress. In this way the child learns to do the dance in the approved form. He gets control of the correct steps. Any other steps would fail to satisfy. In such an environment a child could scarcely do otherwise than respond to the stimulus and so learn.

The second factor in this learning process is *the child's tendencies.* By nature he likes activity. To move about in rhythm is satisfying to his nervous system. He enjoys the thrill of the music from the hurdy-gurdy. He likes the group activity — to do what his mates are doing is in accord with the demands of his nature. To do what the environment sanctions is a natural tendency. He dances because he is so constituted by nature and nurture that it would be difficult to do otherwise.

The third factor is *the satisfaction accompanying his doing.* Satisfaction comes from doing the thing to which the environment stimulates him and to which his nature is inclined. It is satisfying just to move because his body craves activity. To move in unison with the music is a familiar experience in the life of one living in a music-loving community and therefore satisfying. To join his mates in concerted action meets the demands of his gregarious nature. To feel the approval of the adult members of the community about him brings satisfaction. To succeed in doing the thing he attempts is satisfying. All these satisfactions tend to strengthen the tendency to respond in this manner again under similar circumstances. The greater the tendency to do the thing, the more it is done. The more it is done, the stronger the connections and hence the greater the learning.

The fourth factor is *the definite thing learned* — to dance to the music. It is the thing needed if he would live fully in the life of this music-loving people with

their resultant manners and customs. Without the ability to participate in these dances he could not fully be one of his social group. Such learning is expected of him. To dance is essential to his complete living. It is *a part of the curriculum of life about him.* He learns this thing *by* the tuition of the life about him, *for* the life in which he is engaging now, and *in* the life he is living now. It is learning in living.

The prevalence of informal learnings in living. The two examples of "picked-up" learnings just given are but examples of the many things a child learns informally. Most of the language habits of a child are a reflection of the language habits of his community because they are "picked up" in the effort to communicate with others. Note the ease with which a child acquires slang. The fact that he knows how to play marbles, and the games of "Black Man," "Needle's Eye," "Dare Base," and "Hop Scotch" are further illustrations of the fact that many learnings are "picked up." His standards of judgment are similarly acquired. No one seems to have sought to teach children these things.

There probably was a time when all a child's learnings were of this informal type. Then no learning occurred apart from the learning in doing incident to daily living. The child learned in the process of living. Ways of providing and using food and clothes were learned in the process of doing these things, under the guidance and example of his elders.

In the days of hand-made goods the home was rich

in opportunities for such informal learnings. Making furniture, building houses, grinding grain, spinning, weaving, tanning, and baking were commonplaces in the environment. Necessity was a strong stimulus to participation in these activities. Learnings were many and varied. They were intrinsic in the process of living. Decisions as to conduct and attitudes relative to significant questions were so learned, just as was the process of churning butter or wielding an axe. The home of colonial days, and the diversified farm of more recent times, are illustrations of excellent "schools" of informal learnings. In these, children gathered for themselves a store of meanings and abilities worthy of many a modern school, and they gathered them under the impetus of their own activity in living. Instances are not rare of men, the products of such living conditions, who have boasted of their little schooling.

Conditions to-day are changed, and home activities are much more limited in their variety. Baking, knitting, butter-making, spinning, weaving, sewing, candle-making, shoemaking, drying foods, and making jellies and preserves have passed out of the home, or are about to do so. Even washing and ironing are less frequently seen there. Similarly such farm activities as butchering and smoking meat, grinding grains, hatching chickens, and making soap are less frequently found. Many of the processes essential to the maintenance of life in comfort are now carried on behind closed factory doors. The home is becom-

ing less and less a place where the family lives together and is engaged in worthy endeavors, and it is likewise becoming less active as a family which coöperates with a community of families in promoting the common welfare. To the extent that these things are true, to this extent there are fewer opportunities for many and varied learnings of the informal type. Children cannot well learn things in the absence of an environment which stimulates the activities through which such learnings come.

The occasion of formal learnings. Where society has felt the necessity for certain learnings to be ready when the occasion arises for their use, and if it has felt there was no certainty that the learnings could be "picked up" informally, it has made provision for the formal teaching of them. Thus, when religious ideas and customs had taken on a ceremonial form, into which the youth was to be inducted at a certain age, some agency was provided for *preparing* the youth for induction into the ceremony. *The form was taught in advance of the religious experience.* Thus, as an important phase of human experience took on a definite form or convention, that is, as the phase of experience became more and more organized, adults tended to seek to provide some one to teach this formalized experience to the young, with the thought that thus the young would be prepared to meet these adult situations when they arose.

As such forms or conventions came to be taught, emphasis was put upon the form which was to be

mastered and it was taught, abstracted from the experiences in which use naturally embeds it. The form was taught in advance of the experience of using it. Such teaching meant teaching the thing stripped of its functioning connections. Thus the child came to know more about the form of the thing than its meanings in interpreting experience. Such learnings often failed to function because they were not associated with use, due to the failure to establish sufficient *connections in use.*

New agencies for informal learnings. The industrial changes which have made the home less fruitful of rich learnings, which the child can "pick up" in the process of living there, have also brought many changes in community life which are making a different sort of incidental learnings prevalent. The radio has greatly enlarged the child's world, both in distance and in variety. The automobile has brought to the child a larger community which serves as the stimulating environment. The daily paper, the moving picture, the magazine, and the airplane are destroying the barriers which formerly shut the child into a narrow environment. The whole world of experience is coming to be his. The multiplicity and complexity of experiences is thus greatly increased. In character, the stimuli of this enlarged environment seem to be different. They seem to be more entertaining. The experiences take more of the nature of the vicarious. There seems to be less necessity for effective outcomes in the child's responses made to the stimuli met.

There is less need for the child *to do* something because he feels his responsibility in the situation in which he is living. There is less of the dynamic in what he does as a result of the stimuli.

The learning situation to-day seems to contain three elements which must be considered:

1. In the past much of the learning of the young came informally through the activities in the home and the narrow community. To-day the home is so changing its nature that fewer activities are conducted there.

2. Formal learnings, which seem to have been relied upon to teach certain organizations of race experience, and to teach them in advance of the individual's own experience in the matter, appear to be inadequate because such learnings are stripped of many vital connections. Not being bedded in living experiences, they fail to function fully in living.

3. Many new sorts of informal learnings are appearing, due to recent inventions and changed community life, which are bringing a much larger and a much more complex environment to growing children, and are making the problem of education much more complicated. Too many of these learnings tend to be passive in type. What is the best way to meet the situation?

With the changing factors in home and community life we must look to them for a different set of informal learnings, but we must recognize and utilize the ones that they do offer. Where informal learnings give inadequate practice to fix the learnings, the school

must supplement the practice with what may be called formal learnings, but these should be as closely related as is possible to the experiences giving rise to them. The school itself, in becoming a real center of community living, offers many opportunities for guided learning closely related to living situations involving them.

The learning process. Many psychologists state the facts of the learning process in terms of what some call the $S \longrightarrow R$ bond theory. In this formula S means the total stimulus or situation, the arrow suggests the path the stimulus takes in passing through the nervous mechanism of the individual, and R the response made to the S. As activity takes place, this R tends to become established if satisfaction results in making it. These satisfactions are of the kinds already mentioned: the satisfaction of doing what one's nervous system is ready to do, the satisfaction of conforming to the group life, and the satisfactions coming from agreeable accompaniments of the response, such as the approval of others or relief from some discomforts.

In saying that the response tends to become established the psychologist means that the connections between neurones, making up the path along which the stimulus is conducted, become more firmly established, making it less likely that the conduction may pass into some other response. If one is learning touch typing, the first time he tries to strike *a* without looking at his hands he encounters delay and feels the need for effort before he can cause the little finger of the left hand to

make this response of striking *a*. Each success in doing this, however, so tends to establish the connections between his neurones that more and more surely the little finger of the left hand, rather than some other finger, tends to strike the key upon which it rests as it should do when the *a* stimulus comes.

Inborn tendencies and learned responses. Psychologists tell us further that these $S \longrightarrow R$ bonds have at any time more or less strong tendencies or conditions of readiness to make their responses. In part these conditions of readiness are spoken of as native or inborn, but since, as there is more and more experience in living, the activity causes modifications or learnings to take place, these inborn tendencies are gradually modified. Hence we say that most of an individual's tendencies to action are learned tendencies, the inborn responses having been modified into learned responses.

Because of differences in inborn tendencies, and differences in the sorts of experience which individuals encounter — the experiences by which they are modified, individuals vary much in their readiness to act. There are differences in sensitivity, both in kind and in degree; that is, we may say that individuals differ in their selective qualities. Similarly the responses vary. Thus we have individuality. One's readiness for a given action at any time is the resultant of his past experience.

Laws controlling learning. There are three important laws controlling learning:

1. One refers to the readiness of the nervous mechanism to act, already mentioned.

2. Another refers to the number of times one makes the response. The greater the number of times, "other things being equal," the surer the learning. This is the law of exercise.

3. The third law relates to the degree of satisfaction or annoyance resulting. The greater the satisfaction, the surer the learning. This is the law of effect.

Professor Thorndike tells us that his experimentation indicates that of these last two laws the more potent one is the law of effect. With the children dancing in the street, the approval of their mates and elders, the activity with the group, the response to melody and rhythm, and the sheer joy in free activity are more significant for learning than is the number of times they do dance. With the boy driving the automobile, the success in driving, the approval of the family, and the sheer satisfaction in doing what his nature is urging him to do produce the learning in the face of very limited practice in driving.

These three laws are effective as the experience involves the factors in learning already enumerated: (*a*) the environment, (*b*) the child's tendencies, (*c*) the satisfaction resulting, and (*d*) the definite thing learned. As the environment shifts, the stimulus to action varies and the satisfiers vary. The conditions of readiness of the child depend upon his inborn and learned tendencies. He cannot be ready for doing a thing which is in no way connected either with inborn

tendencies or with previous satisfactions in doing. If he is set toward doing a certain thing, and there is much in the environment hostile to such doing, his response is the best he can do toward accomplishing his end, *as environment has conditioned his response.* The boy in the back seat in school, eating an apple or reading a novel behind the open, upright geography, is but doing his best to accomplish the end which to him is worth while. He acts in the face of the obstacles which the school situation presents. The resultant response, spoken of as deceit and failure to learn geography facts, may be unsatisfactory to the master, but the child is meeting that environment in his way, as his equipment has fitted him to meet it, and, in so doing, is learning to make just such responses to such environments. The geography is so placed as to avoid any annoyance from the teacher in the boy's attempt to carry out the thing he is inclined to do.

Other factors involved in the learning process. In addition to the three great laws which operate in any learning there are some important factors which must be recognized if one would guide the process:

1. In any given situation there are several possible responses one may be able to make. The hungry animal in a cage with savory food outside has several different things he can do in trying to get the food. It is in this range of possible responses that the hope of learning a new response lies.

2. Of these various responses one is outstanding. It is the one he tends to try first. It is the one he

tends to try repeatedly. As it fails to bring the desired result, it tends to be less potent. The law of effect is weakening its strength. This gives other possible responses a chance of becoming prepotent.

3. As one learns to make a response he tends to associate this response with all the elements in the situation in which it occurred. The richer the number and variety of these elements the more numerous these associations or connections.

4. After one has learned to make a definite response to a given situation, a part of the situation may be sufficient to call out the response. Thus a response learned in relation to a richly detailed and varied stimulus has many possibilities of being called into action.

5. Because of this association of the response to the elements in the stimulus, and because of the ability of part of the elements to call forth the response we can shift the response to a more desirable stimulus. If a boy reads books having in them the elements A B C, he will read a book having the elements B C. If he reads a B C book, he will read a B C D book. If he will read a B C D book, he will read a C D book, and, if this, a C D E book. This will, in turn, make him respond to a D E book, etc. Thus the process of reading is shifted from a habit of reading books containing the elements A B C to one containing the elements D E. . . .

The number of learning responses in a given situation. Some infer from the consideration of the laws

involved in a single learning that these learnings come singly. As a matter of fact, many are in action at any given time. Indeed, it would be difficult to find a situation where only one bond or connection is involved. For this reason we cannot say that we really learn only one thing at a time. While a class is engaged in learning to sing a new song, it is at the same time adding something to several other learnings. It is increasing or decreasing its liking to sing together; it is learning to think, more or less, of the ability of the class to produce music; it is learning to like the teacher, more or less, similarly the school and one another; it is learning, more or less, about music notation, and it is adding something to or substracting from its notion of individual conduct in group action.

Teaching, then, is concerned with the guidance of many different learnings. A good teacher does not lose sight of some while striving for another. When conducting a lesson in spelling, one does not escape from the learnings involved in the use of the voice, correct English, penmanship, courteous manner, and posture, nor is one to forget that in the spelling period are developing attitudes toward efficiency, fair play, and the class members and the teacher.

The stream of learning. When we think of the continuous process of these numerous individual learnings which go to make up one's attitudes and appreciations we get some notion of the term used by Professor James when he spoke of the stream of consciousness. It adds significance to the term, continuum, used by

Professor MacVannel. It suggests a total set of learnings going on at a given time. It gives significance to the "ongoing activity," of which Professor Dewey speaks in his writings. It helps us to see the emphasis placed by the latter and by Professor Kilpatrick upon the fact that the thing one is doing now leads to the thing one does next. Present doing gives one the vision of what he may attempt next and, likewise, gives one the means, the abilities to attempt this next step which he visions.

Kinds of learnings. All learnings come through the operation of the laws of learning. Wherever there is experience, the factors of environment, practice, and effect are working. Some require definite repetition and the resultant is easily recognized. This is true of specific knowledges and skills. In all kinds we are continuously changing and modifying as our experience changes. These changes bring about attitudes and appreciations. Some learnings come quickly, following direct, definite practice. Some come slowly and are the indirect resultant of the things we are doing. Often we are not aware that certain learnings are in progress. To cover the variables we speak of the entire group as including knowledges, skills, habits, attitudes, and appreciations. The exact differences between them are not easily stated. In our efforts to do so we often forget that all are learnings which result from activity and that in this activity there is the factor of individual readiness, the factor of practice of the activity, and the factor of satisfaction or annoyance in the doing.

At any given time we may say that in a real sense an individual is the sum total of his learnings up to that time. His character gets its significance through his knowledges, skills, habits, attitudes, and appreciations. His conduct results from these. His purposes, the things he is striving to do, have very close connection with all these learnings.

Summary. Learnings are of two sorts — formal and informal. The informal learnings are not directly sought but are the resultant of experiencing. The changing industrial and economic situation is modifying the home and thus producing a different type of informal learnings there. Formal learnings have been definitely sought usually in a school for such. Often these were poorly connected with life because learned in advance of the need for them.

Learning is a change taking place in the connections of the nervous system as a result of responding to some stimulus to action. It is to be secured through the action of the laws of readiness, exercise, and effect as they produce the changed responses. These learnings do not come singly but together make up the character traits of the individual at any given time.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. List factors in the immediate environment to which the school work may help the children of a fifth grade to make better responses.
2. Suppose one of the children of a given class should move to another section of the city. What new factors in the environment will he encounter?

3. Suggest things a class might do that would modify for them the meaning of soil, boards, woven design in table linen, dishes, maps, the daily newspaper, cereals, roads, papers, the most cherished historic spot in the town.
4. Name a desirable change in the conduct of these children toward each of the items just listed.
5. In this age of mechanical devices for producing music what sort of musical education is desirable? What sort of economy is there in teaching individuals to play musical instruments?
6. Study the things a group of children have already learned. Make a list of their informal learnings. Make a list of their learnings that you are sure would not have come without much use of practice drill materials.
7. Can a school be so organized that there is no need for formal drill?
8. Make a list of formal learnings you believe should be learned in relation to recognized use for them.
9. Make a list of learnings in the home that were not there a hundred years ago.
10. Make a list of learnings in the home of a hundred years ago that are not there to-day.
11. Watch a group of children planning an undertaking. Trace their readiness for this enterprise back to its beginnings.
12. Visit eight or ten class periods, distributed through as many different groups. In each case trace back to its beginnings, the thing you find them doing. Do you get any suggestions as to eagerness for doing?
13. Visit a class and note all the informal learnings you see in process of being acquired.

CHAPTER III

THE NATURE OF THE SCHOOL

The learning situation to-day — Significance of the environment in the process of living and learning — Education the widening of experience — Significance of the child's tendencies in the process of living and learning — Significance of the responses learned in a program of living and learning — Significance of the teacher in the school — Significance of group living — The school as an inclusive type of group living — The worth of a school — The essentials of group living — Living as a continuous process of meeting situations as they are — Realities of a class of children.

Summary — Suggestions for thought and discussion.

The learning situation to-day. Reviewing what has already been pointed out, we know that the family does not now provide so rich a learning environment as it once did, and hence it is now failing to produce all the desirable learnings it once produced. The developments of science and their applications to living conveniences have brought the need for a very large body of learnings as necessary to adequate living. Some of the achievements of science have resulted in greatly enlarging the child's world. The automobile has made a journey of one hundred miles much simpler than one of ten miles only a short time ago. The child literally sees much more of the world than was formerly possible. The radio and the airplane likewise have served in annihilating distance, and so in enlarging the child's world. The newspaper, moving picture, and magazine are daily bringing to the child a great diversity of experiences from all parts of the

world. His own world is not only many times larger, but also much more complex, than it used to be for children.

The kinds of experiences, possible because of these inventions, are not only extremely complex and varied, but, permeating many, if not most of them, is a characteristic which raises an acute educational problem. The responses of the child to them are often somewhat passive in character. He *listens* to the radio, he *watches* the airplane, or possibly *rides in it*, he *looks at* the movie, and he *reads about* adventure in a strange land. There is an element of dynamic lacking in his response. The experience is largely vicarious. His response makes little or no difference in the thing that he is experiencing, and has little effect upon the conditions of living about him. He has little responsibility for doing something. What he does, in such situations, matters little to any one else.

Likewise it may be well to note his responses in relation to conditions of living. How seriously are those about him concerned in the way he reacts to the necessities of life? All too often the food is provided for him; his clothes are bought for him; the home is made comfortable for him. Too often he is merely a consumer of commodities. Where does his responsibility lie? Where shall we find for him the valuable dynamic in living?

It has been suggested that informal learnings are much more likely to function when needed than are formal learnings, because they are learned in living

situations, for living necessities, and by living experiences. How can richness of learning be provided for the youth to-day? It seems doubtful that the home ever again will be so organized as to meet the situation in the way it once did. Some agency must be designated to do this. What sort of an agency can provide learning in living? What sorts of learning experience are needed to provide for the enlarged world of daily life, and for the complexities and varieties due to this enlargement? How can we get dynamic experiences which are adequate for meeting the situations that confront the child? How can he be made to feel a responsibility for results? What sort of school is needed to-day? In attempting to answer these questions let us first recall each of the factors in learning, and consider it in terms of school procedure.

Significance of the environment in the process of living and learning. Living, as has already been shown, is made up of a series of responses one makes to the stimuli about him. The things he does are, to a considerable degree, those things the environment suggests and makes possible, and they constitute his learnings. In a real sense, he is the product of his environment. This is especially noticeable where there is no effort made by society to control the environment. When such effort is made, we may say that education steps in. That is, learnings from responding to the controlled environment are guided, so that the outcomes are more desirable than are the learnings which are "picked up" —- chance learnings

This important function of environment, as the factor which stimulates the activity which results in the learning, is being realized and used in our better schools to-day. They attempt to select and control the school environment. For this reason we find such schools are not limited to the classroom in carrying out their activities. They go to the community, visit a farm or a local dairy, bring into class for discussion questions arising in their life in the community, read newspapers and magazines, use the library, and participate in community life. In such schools the excursion is a normal part of school work. The environment is not restricted to four walls, fixed desks, and limited textbooks. It is extended to the life about the school. It is selected relative to desirable learnings. It is rich and varied. All this is because teachers are realizing that children learn from what they do, and that what they do is largely in response to what stimulates them. The environment is significant in the learning process. Professor Dewey has pointed out that the school environment should seek to simplify, purify, and balance the child's environment. In this way it can exercise some control over the sorts of learning that take place.

It is the intent to purify the environment which prompts a school superintendent to build a moving-picture booth in a school auditorium. The same purpose appears in the plan to have a library of story books in the classroom. The growing of vegetables in connection with school work in a crowded tenement

district gives balance by providing a sort of experience which is grossly lacking in the children's experiences with plant life. Similarly some schools in large cities have seen fit to have in the classroom, where the children can watch and care for them, a hen and chickens, a hive of bees, or some white mice. In placing on the wall one or two good pictures at a time, the learning may be in the nature of developing better taste in keeping the decorations of a room simple.

Not only is the environment significant in that it provides the stimulus to action, but environment is the medium in which the results of the action are noted. If the child does well, he is aware of the approval of people about him. If he does ill, he is conscious of their disapproval. If he succeeds, his action may bring a change in the environment which is the consummation of his effort. In some way many of the satisfiers and annoyers accompanying and following are factors or products of the environment. Through control of these factors and products the teacher can influence the learning which results from the child's activity.

Education the widening of experience. There are those who question the value of using school time to visit a farm, or a clay bank, or a house of historic interest, because, they say, these things are already commonplaces to the children. But education is concerned with widening experience, giving more meaning to the familiar. Professor Bonser has stated it thus: "Education is the process of making the obvious, the

commonplace, more meaningful." We, therefore, begin with the familiar experience and, by inquiry, discussion, reading, and investigation, get a much larger notion of its meaning.

We go to see a clay bank; we bring back some samples of clay; we ask the potter how he prepares the clay for use in making jugs; we try the process with our samples of clay; we read in books to find what clay is and how it came to be buried there in the clay bank; we try making vases of clay; we visit stores to see as many clay products as we can, dishes, vases, crocks, jugs, tiles, bricks; and we list the great variety of things to-day made of clay. Thus the ordinary clay of the environment takes on new meaning — we learn to value it.

Some have become so impressed with the influence of the stimulus of the environment upon what the child does that they have overlooked what happens when the child does something in response to the stimulus. The thing that happens is not only a change in the child's tendencies to do in response to such stimuli, which we call learning, but often there is a change in the environment itself which modifies the situation. The snow is made into a snowball. The ditch is dug. The water is dammed into a pond. The soil is prepared for the planting. As Professor Dewey puts it, there is adaptation *to* the environment and adaptation *of* the environment. The latter is true because the child is a dynamic, effective agent. Our program of learning must take account of both factors.

We are not engaged in a plastic art of molding children. We are attempting to teach them how to control their conduct both (*a*) in fitting *into* the environment, and (*b*) in modifying, changing, shaping, improving the environment because of its influence on living.

Significance of the child's tendencies in the process of living and learning. Since learning is the result of the child's activity, and since activity is the response of the nervous mechanism to the stimuli it receives, the sorts of learnings of a given child in part depend upon the sorts of stimuli to which this child's nervous system is responsive. Each nervous system is selective in its responses. Not all children respond to the same stimuli, nor do they respond in the same way, nor does a given child respond alike to the same things at different ages in its growth. In an attempt, therefore, to direct learning that education may result, account must be taken of the kinds of stimuli to which the child in question is responsive. The teacher must know the child's tendencies, and must know what elements in the environment will stimulate activity of the right sort. Furthermore, the teacher must know to what a given child is responding anyhow, because, since it is the child's activity which is producing the learning, education must begin with what he is doing.

It, therefore, is imperative that a teacher know the impelling tendencies of each child she is attempting to teach. In no other way can she select and control environment so as to get desired responses with their resultant learnings. This learning is something the

child does. The impulse to action is within him. In a given environment, the selective agency which determines the kind of activity is his own nature.

A teacher who meets the educational needs of to-day knows the nature of the individual child, finds out the factors in his environment to which he is responding, and sees to it that there is guidance in helping him to respond more wisely to the more desirable stimuli.

Significance of the responses learned in a program of living and learning. The learnings are the outcomes of activity. The series of activities which secure the desirable outcomes, together with the learnings resulting, constitute the curriculum. The responses are learned in the degree that satisfaction results from doing. This satisfaction comes in part as environing approval, in part as the culmination of successful accomplishment in doing the thing toward which one is set, and in part in the activity itself. For these reasons it is extremely important that the teacher be careful in seeking the desirable learnings or outcomes. The activities, leading to the outcomes, which together constitute the curriculum, must be such that the child may reasonably be expected to want to do them under desirable stimulus, and such as will bring the proper satisfactions as the result of the child's doing them. If the proper satisfactions result, it means that the thing learned fits into the life the child is living. Otherwise there is no environing approval. The continuous process of getting satisfaction in doing things that fit into the life about one causes one to

form habits of finding the satisfaction of fitting into the life about him. These habits help him then in meeting new situations, and in that sense contribute to the child's preparation for adult life, for he comes to adult life through the continuous process of following habits of fitting into the life each day brings.

The curriculum of a school is significant since it is the sum total of the activities in which the child may engage while living in the school. These activities bring the desired learnings, while at the same time he is building habits of learning in living and so continuously fitting into life.

Significance of the teacher in the school. As has already been stated, the child learns with every activity. Not all these learnings are desirable. Many that are "picked up" are not useful to him in living well. Since his learnings are conditioned by the environment which stimulates his action, and also by the environment which approves or disapproves of what he does, it is possible to exercise control over what he learns. Changing the stimulus to activity changes activity, and thereby changes learning. Shifting the environment may shift the amount of approval or disapproval accompanying the activity, and thereby modify the learning. Because of these possibilities of control we may have guided learning, and this is what directed education is as compared with the process of chance learnings.

The teacher is the one designated by society to guide the process of learning so that the outcomes

may be most desirable. She it is who can to some extent modify the environment; she is largely influential in making it attractive to childhood; through her influence can social approval be controlled.

Some have stressed the teacher's place in the educative process so much as to impute to her the authority of an autocrat. Some have minimized her part so much as to render her practically impotent. She is neither a master potter shaping the clay at will, nor a meek servant waiting the command of a dictator. The one with whom she works is a living, growing individual whose chief tendency is self-impelled activity, but who is susceptible to the helpful suggestions of one he respects. This is true because the learner is a social being who finds satisfaction in success in what he undertakes, as it brings the approval of those about him whom he respects.

The teacher then is a very important factor in the learning process (*a*) because she can know better than the child the goals to which activity may lead; (*b*) because she can, to some extent, by elimination, addition, and emphasis, modify the environment and so change the stimulus to action and the approval of others; and (*c*) because she can thereby teach the child more consciously to select what he does and to be responsible for his conduct.

Significance of group living. The most significant factor in the environment is people. In civilized society no one lives alone. Everything one does has reference in some degree to others. Group organiza-

tion and coöperation are essential to living. Interdependence is a necessity. This living with people tends naturally to take on group organization of some sort. A social group consists of those who find themselves bound together because of common interests and common objectives. They belong together by reason of mutual needs, mutual dependence, mutual understanding. A social group has interaction with other social groups in two ways. In the one way, one group joins with another or clashes with another over something in which both are interested. In the other, individual members of a group may likewise have membership in other groups of different types of interest. Such diversified membership tends to enrich the given group because its members, thereby, have more varied contributions to make to the group life.

Professor Dewey has given us two criteria for evaluating the worth of a social group: "How numerous and varied are the interests which are consciously shared? How full and free is the interplay with other forms of association?" [1]

When we consider the social groups in which a given child lives, we are likely to find them varied. There is the family with its obvious necessities, understandings, and interests, which usually bind its members into a lasting unit. There is the church group with its ideals and aspirations, which hold its members by sacred bonds. Then there are the industrial, economic class in which the child finds himself living, the street

[1] Dewey, John: *Democracy and Education*, p. 96.

or neighborhood group with whom he plays, the club or gang of which he is a member, and the civic body under whose government he lives. Each of these groups has its common understandings and sympathies, each has its more or less definitely defined objectives, and each has its environmental conditions and possibilities which affect the group effort put forth to achieve its ends.

As we look at these varied societies in which this child lives, we find that each by its very inclusiveness is exclusive. The little boy of the Methodist group is of necessity outside the bounds of Presbyterianism. The strength of the togetherness of a society means a corresponding force of exclusiveness. This is an innate characteristic of a society. For this reason the learnings which come from living in these groups are not broad enough to represent complete living and understanding. All these social groups make for what may fairly be called class lines. Living in a democracy, in a world of human intercourse, demands a more inclusive type of living.

The school as an inclusive type of group living. The public school is the one social group in which membership is made up, at least in theory, of all the children of all the people, living on a common basis. It provides for learnings which are impossible in the other groups. The corollary of diversity in membership is diversity in interests and experiences. This means the possibility of a richness in experience through mutual sharing which is involved in any group living. In the

diversity of experience to be found in the lives of school children coming from varied home conditions there is possibility of much richness to be derived by sharing. It means greater breadth of understanding, greater sympathies.

A school, then, is a type of group living provided by society which implies possible learnings not available in any other social group. Because it is a definitely provided type of group living, it can consciously seek stated outcomes in learning. It is studied, planned in its nature, and therefore has great possibilities of guided learnings. As compared with the chance, "picked up" learnings of the neighborhood, we may say that its outcomes are more certainly desirable and its processes more truly educative. Because it is a definitely planned organization, its environment can be controlled in a larger sense than can the environments of the other social groups in which the child lives.

The worth of a school. Applying Professor Dewey's two criteria for evaluating a society, we may judge the worth of a given school as an agency of group living and learning by asking:

1. How strong and how varied are the bonds which hold the children of this class together? How definite is the group consciousness of these children? Are they aware of their common interests, their needs, their possibilities? Do they realize what they can do if they combine forces? Do they know the special abilities of their individual members? Do they have recog-

nized objectives? How definitely have they stated their objectives? Have they agreed as to what they want to accomplish when they are together? Do they share experiences and problems? Do they cooperate? Do they feel a responsibility to each other for conduct? Is there a class pride which demands high standards? Do they critically pass judgment upon the results of their activities? How rich is their living together? Are the learnings worthy?

2. With how many other social groups does this school have contact? Is it shut within the four walls of the school room? Does this class have any mutual exchange with any other class? Does it coöperate with any social agencies in the community? Is the life about the school of concern to this class? Are its members individually members of other social groups? How diversified are the social groups in which these children live? How much opportunity is there for making the experiences of these varied social groups available to this school group?

The essentials of group living. Group living varies much, but its essentials are simple and worthy of note if one would be a teacher guiding a group of children in their attempt to live together and learn. Some essentials of group living are these:

1. *Group consciousness* is, as already indicated, essential to a society. The members must understand each other. They must have common sympathies and interests. They must know what their united strength is. They must recognize their leaders, their

diversified abilities, and their resources. The teacher of a class should seek continuously to develop this group consciousness. To the extent that she succeeds can she hope to develop group living and learning.

2. *Common objectives* must be definitely stated. If the children do not define what they intend to accomplish, they cannot act together. Such a definite statement of objectives should be made when they first set up their living program. This listing of objectives should be included in the work of the first week of school. As increasing group consciousness comes, as it should continue to do throughout the period of living together, these objectives need to be modified. Increasing awareness of class abilities brings proposals of new objectives not thought of earlier.

3. *Means of living and realizing the objectives* are obviously necessary. There must be a place to live — a home base as it were. There must be, not so much a supply of the tools and materials of this living, as the freedom to get what is needed when it is found to be necessary. There must, therefore, be access to the resources of the environment. Activity requires space. Too much equipment and too many supplies provided in advance of realized need tend to crowd the activity and to limit initiative. Further, such provision robs the children of experience in facing the implications and necessities of proposed activities. If we wish them to learn self-control, in group life, we must not, by our anticipating all their needs and providing for them, take from the children the responsibility of carrying

their decisions through to successful results. It is not necessarily good for children to be placed in an elaborately equipped room, but it is essential that they have freedom in using the resources of the environment in carrying out their objectives.

4. *Freedom and responsibility in initiating activity* are essential to real group living. Without this freedom, such group consciousness as is developed has to resort to subterfuges; it has to encounter the inhibitions of authority. Such inhibitions reduce materially the amount of group activity and the value of the outcomes. Initiation of activity should carry with it a sense of responsibility for results. This should be an essential element in group learning.

5. *A program of living* must be outlined by any group which seriously expects to accomplish the objectives it has set up. Any group procedure, working without a definite program, must of necessity fall short of its goals. The degree of flexibility of program will of necessity vary with social groups. Fixity in procedure tends to routine, which is economical so long as it is under the control of those who use it. Such control prevents the procedure from being deadening, but control implies the probable necessity of variation. To the degree that environment is variable, to that degree must the program of the group living in an environment be subject to change.

It is believed that there is a value to be derived in leading the children to formulate the program of school procedure, for then they will get a notion of the proper

distribution of time so as to accomplish their objectives. In so doing will they learn responsibility in the use of time to accomplish results.

6. *A method of living together* must be worked out. This means using the processes of coöperating, sharing, deciding together, planning together, pooling experiences and resources, discussing methods, and evaluating and judging results. Real living, whether in the home, or street, or school, involves such mutual exchange and helpfulness.

7. *Guidance and leadership* are essential to any worthy group living to the end that progress may be made, ends be reached, goals be realized. It is the province of a teacher in a school to provide such guidance. A leader or guide means one who has been over the road, one who has experienced this sort of activity, one who knows the implications of the proposed pursuits, one who is resourceful in helping those they are leading to meet difficulties, one who is responsible and able to help each individual to feel his responsibility. A forest guide does not do the hiking for the members of the party he is piloting, but he is ready with advice, based upon experience; he knows the road, he is resourceful in meeting difficulties, and he inspires confidence.

8. *Provision for individuality* is necessary. No group can be better than its individual members. The school exists as an agency in developing individuals. A program of group living should then include adequate provision for each individual to become his best

self. When school work is so conducted that individuals discover abilities in themselves that they had not recognized, then is a school revealing to an individual his possibilities. Many such possibilities can be found in group living, and can be found in no other way. The growing respect of the group for the abilities of its individual members is evidence of a wholesome mode of living. By its very nature the school can provide for a type of individual freedom in group action which is essential to fullness of becoming.

Living as a continuous process of meeting situations as they are. Whenever we consider education as living and learning in school, there always arise some who at once proceed to manufacture artificialities, to devise make-believe situations, and to set up elaborate machinery for this their devised living. And so they must have a child chairman, whether or not such a chairman can best lead the group to the desired goal. Often it is true that a child chairman is desirable because of learnings resulting, but it is not necessarily, essentially true. A make-believe store may be good in realizing more details of buying and selling as a social process where children live in a very limiting environment, but often the attention becomes so consumed with the details of such an imaginary situation that *real* buying situations, actually in the lives of the children, are lost sight of.

Any living situation of a group is so bedded in realities, that we seldom need to resort to artificialities. We do need to recognize the realities which are already

vital in the children's lives, and help the children to cope with them. Efficiency and expedition are important characteristics of successful living. We should teach children to avoid resorting to devices, to face the facts of the situation, and to set up a minimum of machinery — in fact to take the shortest, most direct, effective method of accomplishing the results for which they are responsible. All the time, though, we must keep in mind the fact that the learning comes through the pupil's own activity, and in no other way. Thus and thus only will learnings be representative of life.

Realities of a class of children. What are some of the realities in the lives of a group of children living in a classroom for a year? They have outdoor wraps which must be cared for and worn at proper times. They have a classroom with its common possessions. They have their individual spaces in this classroom. They have individual possessions which they must care for. They have need and desire for activity. They like fun, play, stories, games. They have many questions they would like to have answered. They must exercise. They must eat. There are other children with whom they come into contact. They must go to and from school. They encounter traffic. They read newspapers and magazines. They discuss community affairs. They read the billboards. They feel the influence of the community life upon what they do in school. Flowers are brought into the classroom and must be arranged in vases. The room must

be kept in order. Materials and supplies must be cared for. Pictures intended for the room must be hung somewhere. The clothes they wear need to be cared for to avoid injury. The things they do result in papers, maps, charts, drawings — all of which must be put somewhere. They all have a responsibility to parents and to the community which they must meet. They must have some sort of attitude to guide their conduct with reference to streets, parks, public buildings, and public utilities. They are forming attitudes. They are expressing opinions about the things happening about them. The room must be properly heated and ventilated.

These are realities which exist wherever a teacher and group of children come together in the capacity of a school. And these realities are in some way met. Where the teacher fails to see the learnings going on as conduct with reference to these realities, the learnings are unguided and frequently undesirable. Can the teacher seize upon these realities and so organize the daily living in school that valuable learnings result? Can a school be a place where children learn in the process of living together?

Summary. The situation to-day demands a form of education which will make up the educative losses due to a changing family life, give real opportunity for scientific learnings, help children use the scientific conveniences of to-day, give the children a breadth of experience adequate to help them enter into the enlarged world living, conserve the advantages of in-

formal learnings by providing real living as a basis of learning, and provide opportunity for dynamic experiences in teaching the child to face his realities and responsibilities.

In a program of living and thereby learning, the environment, the child's tendencies, the curriculum, the teacher, and group living are the educative factors. The school represents the most inclusive type of group living, and provides some learnings which can be secured in no other way. The essentials of group living are group consciousness, common objectives, means of living and realizing the objectives, freedom and responsibility in initiating activity, a program of living, a coöperative method of living, guidance or leadership, and provision for individuality.

This living, as is always true of living, means a continuous process of meeting situations as they are. This means recognizing and taking account of the realities inevitable in a process of group living. A school should be a place that provides a rich, full living experience in terms of getting meanings out of facing the realities of life as lived by the children constituting the school.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. Visit several classrooms. Evaluate them by Professor Dewey's two criteria. Make suggestions as to modification of the work in terms of these criteria.
2. List all the things you can find that a given class does which brings it into contact with other groups.
3. Make a list of the traditional school "sins," such as whispering. Which of these would be classified dif-

ferently in a school which satisfactorily meets Professor Dewey's criteria?

4. Does the informal type of school have as much note-writing as the formal school? As much use of the deaf-and-dumb language? Why?
5. In the classrooms you have observed recently which of the essentials of group living are neglected? What changes in present conditions are needed in order that these essentials may be possible?
6. Study one classroom carefully. List everything you can find that seems to hold the children so that they have a feeling of belonging together. List the possibilities that you can see which could be utilized in developing a greater group consciousness.
7. The training student usually is not regarded by the children he is teaching as belonging to their class group. If he is truly to teach them, the children must come to feel that he is an essential part of the group life in that room. What changes in the student's work do you feel would be necessary to further the development of such a relationship? What changes would be needed within the classroom?
8. Study the plan developed by Professor Harry Miller at the University of Wisconsin in the student training at the University High School. What suggestions does it offer for developing a group consciousness which includes the student teachers?
9. How would such a group consciousness further integration of the work of the children?
10. Watch a group of children at work in a classroom. Note the tendencies to action they manifest which the class work does not seem to meet. Suggest what you would do about these tendencies.
11. Watch a class of children at work. List all the things the teacher does which you would classify as guidance. List all the things she does which you would classify as dictation.

12. Many school rooms can be found having on their walls charts showing successes in arithmetic, spelling, and reading. Should a visitor expect to be able to infer from these charts something as to the prevalence of group instruction? What influence should these records have upon class schedule?
13. List the realities of a classroom that you know very well. How many of them are being met by teacher direction? Point out those which give promise of worthy learnings if the children are taught to meet them.
14. List all the evidences, to be found in classes recently visited, that the learning process going on is in any way related to the children's own environment.

CHAPTER IV

THE NATURE OF THE RECITATION

The function of the recitation — Recitation a doing together — Classification of recitation procedures:

I. *Suggestions for evaluating procedure where a skill or habit is being acquired or strengthened* — Nine criteria.

II. *Suggestions for evaluating procedure where a challenging problem is being considered* — Ten criteria.

III. *Suggestions for evaluating procedure where the class period is devoted to enjoying some products in the field of beauty* — Five criteria.

IV. *Suggestions for evaluating procedure where the class is attempting constructive, creative work* — Seven criteria.

V. *Suggestions for evaluating procedure where the purpose is to conduct a class conference* — Seven criteria.

The importance of sincerity in group effort — The province of the teacher in a recitation — Some values in the teacher's guidance in group learning.

Summary — Suggestions for thought and discussion.

The function of the recitation. As was indicated in the discussion of Chapter I, relating to the making of the program, the time in school should be apportioned so as best to facilitate the group living in carrying forward the objectives set up. Part of the school time should be given to individual effort in meeting responsibilities to the group. Other time should be used in working in small groups, or in all working together.

When a large number work together we have been accustomed to speak of it as a "recitation." With the changed notions relative to the learning process and to the function of the school, the old meaning of

re-citation has ceased to be generally useful. To-day a recitation is coming to mean a time when the children work together, usually under the direct guidance of the teacher, to accomplish that which can be accomplished better when working together than when working separately.

To illustrate what is meant, each child may read all he can find explaining the origin of a custom or the causes of some physical phenomenon. Following this individual work it is of advantage to have a "recitation" in which the children pool their findings, discuss the significance of these, have difficult points cleared up, possibly formulate any questions yet unsolved, and decide what to do next. Or a group of children may become interested in gathering poems about rivers and brooks, or pictures about mills or spinning. Each child will do all he can individually. The "recitation" is the time when the poems or pictures are brought together for the whole group. Again, a group may have gathered a number of phonographic records of Christmas carols. The "recitation" may be a period when they listen to the playing of the records. Still again, a class may have exhausted its resources in finding how crucible steel is made. One "recitation" may be the time when the teacher supplements the children's efforts by describing the process as she once saw it. Or a class may be engaged in mastering column addition. They may need specific drill where the teacher holds them to working under time limits. A "recitation" would be such a drill period.

The drill period as a recitation would be a matter of economy in the time of the teacher where her help as time-keeper would be used to better advantage by drilling the children together, than one at a time. Similarly, it would be economical to tell all the children together about the process of making crucible steel. The time given to listening together to the phonographic records saves the confusion that would result if each child played the records for himself while others were doing other things. Then there seems to be an added value in the community of listening. The consciousness that others are listening to the same seems to promote an emotional quality favorable to the enjoyment of the beautiful. The recitation time, given to reporting, discussing, evaluating, and explaining the findings of individuals, and the resulting ideas about a challenging question, brings to each the opportunity to enrich his findings and ideas, often serves to stimulate individuals to further thinking, and furnishes the basis for the group to decide upon its next step.

Recitation a doing together. From this variety of things which a class may do in a recitation it would seem that the only connotation attaching to the term "recitation," consistent with more recent educational theory, is that of *doing together*. Whenever a class of children work together we have to think of applying the laws of learning to group action. The applications will vary with the sorts of things they are doing. When working to acquire a specific skill it is good pro-

cedure to close the period with some sort of test to find how much one has gained by the practice. On the other hand, in the light of our present knowledge of how one enjoys music or poetry, it seems to be doubtful procedure to attempt to register or measure one's enjoyment in listening to the music or poetry. It follows, then, that there are as many recitation procedures as there are kinds of things a group may do together. Certainly there can be no one way of conducting a recitation. Whatever is done in this period must be such as to permit the laws of learning to function, but how this will be done will vary greatly at different times and under different circumstances.

Classification of recitation procedures. The sorts of things a group may do together lend themselves to a rough sort of classification as to kinds of procedure, but seldom does one kind entirely monopolize the time when a group is working together. The group may be seeking: (1) to acquire a specific skill or to improve its efficiency in a skill or to strengthen a habit; (2) to get a better understanding of a challenging situation or question; (3) to enjoy a bit of music, or literature, or art together; (4) to do some creative or constructive work together; or (5) to confer upon the status of their undertakings or their successes in accomplishing their ends. In all such "recitations" the laws of learning are working, but the procedures vary much. We shall consider each of these situations, in order, and offer a number of suggestions or criteria for the proper handling of learning situations. These

criteria will be referred to, from time to time, in the chapters which follow.

I. Suggestions for evaluating procedure where a skill or habit is being acquired or strengthened

1. *Is it the purpose of the learners to acquire this specific skill or to strengthen this habit?* Where such purpose exists, we have a drive or set toward doing the thing which makes for greater effort. Where the whole self is bent upon an activity there seems to be greater intensity in the effort put forth. Further, with intensity of effort greater satisfaction results if the effort is successful. This means greater learning as a result of the satisfaction.

Where does this purpose to learn the skill arise? Out of the satisfactions in previous successful achievements arises new readiness for effort, and this readiness, as it fits into the program of action which the children genuinely sponsor, seems to constitute the purposes. Much, therefore, depends upon (*a*) a genuine setting-up of objectives by the class, and (*b*) seeking to guide the activities of the class so that they constitute a continuous process. This means an integration of the many things the children do so that the whole is unified. All things attempted play into the common plan to live fully. Each activity, instead of being an isolated thing, is a part of the larger program, and its connection with previous and succeeding activities is traceable.

Where such integration is found, there we shall find

drill periods devoted to securing or improving a specific skill needed in carrying on the undertakings, or to memorizing some data, the memory of which is found to be essential in what is being done.

The understanding of the reason underlying a process is not always essential to the use of the process. The world does not concern itself as to whether one understands why he carries in column addition of numbers of more than one place, or why he arranges the partial products as he does in multiplication by two or more figures, but it is concerned as to whether one *can* carry and multiply correctly. In a skill the essential thing is mastery of process. Understanding the reasons for the process gives the satisfaction of getting more meaning out of what one does. Such understanding does not, in the final analysis, come from telling or showing. The individual must himself *see* the principle working in specific instances. It must be his own induction. Inductions come after one has had experiences with several specific instances where the law is working. The number of instances needed varies with the individual. Some never make the induction. Further exposition of this is to be found when discussing the way children learn to think.

2. *Do the learners know exactly how to proceed before they begin to practice?* This applies in all learnings where there is but one right response acceptable in social living. Society places no premium upon originality in spelling, or in column addition. The essential form of a business letter or a bibliography

card in a library is already established, and the child's best interest is furthered, not by experimenting to devise new forms nor by guessing as to what is the right form, but by mastering the accepted form as efficiently as possible. The children should be shown exactly what is correct before they attempt to practice the thing. Time is worse than wasted in experimenting with ways of multiplying, or of fingering the scale of C on the piano, or of holding the brush in trying to master the Japanese brush stroke.

3. *Are the first attempts at practice so safeguarded as to secure some measure of success?* To meet zero difficulties in first attempts at multiplication will probably prove disastrous. Where one is annoyed by failure in his attempts, there is danger of acquiring a distaste for the thing before any degree of mastery is secured. It is better that there be guidance by the teacher, so that there be a sequence of difficulties in the steps one attempts to master.

4. *Are the children giving close attention to their practice?* If conditions are such that there is divided attention, wrong learnings will result. The distracting conditions must be corrected or practice be discontinued. Divided attention makes for reduced effort, and this will not produce the desired results. The children thus will learn to do this thing with a minimum of effort and they will probably learn to do it in a wrong way, for diminished attention usually leads to errors.

5. *Is the time given to practice properly distributed?*

Too long a practice period makes for monotony and loss of interest. Several short periods are better than an equal amount of time in one long period. A long interval admits of too much loss in achievement through forgetting. The more one comes into the mastery of a skill the shorter may be the practice period, and the longer may be the interval between practice periods. The length of a practice period depends, in part, upon the nature of the thing being learned.

In the case of memorizing material, such as a poem, books in recent years have advocated the whole, rather than the piece method. The question as to which is the better method has been the subject of some investigations, the findings of which do not seem to agree. Some seem to indicate a variability in method due to kinds of material and to individual differences in learning.[1]

6. *Does the practice period end with some measure of achievement?* Learning of a specific-drill type seems to be furthered if the learner sees how well he can do after each practice period. There should be some sort of test to close the period, and the test should be immediately scored. It is preferable that each child should score his own paper. This can be done safely if the intent of the class is upon improvement of the efficiency of its individual members. The class will readily devise rules of scoring, if the right class spirit is

[1] Douglas, Harl R.: "A Summary of the Experimental Data on Certain Phases of Memory"; in *Pedagogical Seminary*. March, 1927, pp. 92–117.

developing — rules which will insure rigidity in scoring.

7. *Are the children interested in keeping a record of their scores?* Knowledge of one's score tends to further learning. Part of this is due to the fact that if one is keeping a record of scores, he tends to compare each new score with previous learnings; in so doing he tends to recall how he did the thing when he succeeded, and to look for the causes of failure. Then the sheer satisfaction in seeing one's score improve tends to further learning. Where interest in successful learning is lagging, establishing the practice of keeping scores will usually increase interest and resulting learning.

8. *Are there occasional needs arising which call for the further use of the skill?* The curve of forgetting seems to work more rapidly than the curve of learning. One sure way to break the influence of forgetting is to have a genuine reason for bringing the skill back into active use. This does not mean manufacturing reasons for use of it, but rather an alertness on the part of the teacher for the situations in which its use is needed, and guidance which will prevent the children from slurring lightly such situations.

9. *Is there overlearning?* Mastery of a skill means practice after one can perform it. The psychologists report that they find, by experimentation, that this overlearning is necessary if one would retain mastery.

II. Suggestions for evaluating procedure where a challenging problem is being considered

1. *Does the purpose to solve this problem seem*

genuine with the members of the class? Too many teachers have thought that if an assigned topic in geography or history is phrased as a question, the work is then placed upon a sound learning basis. A problem is a felt difficulty which it is proposed to solve. It must be a difficulty which is met in some course of action. A problem then under consideration by a class, if genuine, is traceable to its origin, where it has arisen in the course of what the children have been doing. This does not necessarily mean that all of the class were aware of it at its inception, but that, in time, it came to be recognized as having a challenge for the class, and only then is it truly a class problem. If a class is working together on a basis of pooling and sharing experiences, an individual may bring to the class something out of his experience which comes to have a challenge for all because of its bearings upon what they are doing together.

The essence of *difficulty* in a problem lies in the appeal of *unsolvedness* which it has for the individuals to whom it is challenging. This appeal may be on the plane of dire necessity, even of life-death values; or it may be on such a plane as that of intellectual curiosity. Whatever the basis, its solution is essential to carrying through the course of action undertaken. One way then to judge the genuineness of the challenge to solve is to identify the problem with the course of action of the class to which it is essential.

2. *Is the problem kept clearly in mind by the members of the class?* The intensity of challenge has some

bearing upon its clarity. The extent to which it is bedded in experiences with concrete, tangible materials, or to which it is an abstraction, will affect its clarity. Some children have not habits of keeping discussion centered closely around the problem. They need help in learning to keep to the point.

Some classes follow the practice of writing the question on the board if there is doubt that all will keep it clearly in mind. Some others form the habit of calling for a restatement of the question if individuals seem confused, or if they tend to carry the discussion away from the issue involved. Both practices indicate a lack of certainty that the problem is challenging and gripping.

3. *In gathering and using data needed for the solution, does the class foster an attitude which demands pertinency and accuracy of statement and verification of data? Is there time and is there opportunity for the class to gather adequate data?* Children should learn the value of exact quotation. They should learn to demand authority for statements made. They should learn to value impartial sources of data, such as government reports, atlases, or the *World Almanac*, as contrasted with statements in stories, or in the circulars designed for advertising purposes. They should learn to see the difference between a statement *about* a subject, and a statement bearing directly upon the issue. They should learn to recognize the difference between opinion and proof. Irrelevancy, approximations, and unreliability of data should find no favor with a class that is doing good work.

4. *Does the class attach a premium to resourcefulness and industry in gathering data?* All should learn to value these traits as essential to good work in meeting challenging questions. Class valuation of the successful efforts of individuals is probably the surest way of promoting interest in developing this ability.

5. *Does the class spirit encourage individuals to offer suggestions as to possible solutions?* The willingness to venture suggestions is not encouraged in timid children unless the class attitude is right. The intensity of the purpose of the class fosters a spirit which encourages such suggestions. There should be developed as a correlate to willingness to offer suggestions, a feeling of responsibility for the suggestions offered. This would prevent offering trivial proposals. Satisfaction in being the one who offered the good suggestion is worthy since it is based upon the natural tendency to like the approval of one's mates. Likewise, it brings the goal nearer. If this is sincerely desired, there is further satisfaction. All this promotes learning to like to offer worthy suggestions. Does the class spirit tend to foster the desire to offer suggestions?

The ability to make such suggestions is possibly largely inborn, but the school can help each child to use to advantage such ability as he has and to respect the ability in others.

6. *Is there a premium placed upon expedition and efficiency in testing out suggestions?* Not all suggestions can be correct. The wrong ones must be

eliminated. Ability to see significant elements helps in this elimination. Ability to see short cuts is of value in finding the correct solution.

7. *In moving toward a solution, is the class work kept organized?* At times it is well to stop and summarize what has been accomplished. This serves to show what is yet to be done. Sometimes a class works more expeditiously if some one records on the blackboard, in brief form, each step as it is made. Where children need help in learning how to take notes, or to outline, this is valuable. Good organization involves (*a*) making a plan of action at the beginning of the work, and (*b*) checking the plan from time to time to reveal progress and to determine next steps.

8. *Is the class developing an open-minded spirit which seeks the truth, and which is willing to abandon wrong suggestions and preconceived notions if proof to the contrary is found?* Such a spirit is cultivated only as one finds satisfaction in doing this. As one sees his objectives furthered in so seeking the truth and in eliminating all other proposals, he learns to value such procedure.

9. *Does the class period further individual thinking?* Where data vary, and where opinions and interpretations do not agree, if these differences are presented to the group in a spirit of coöperative effort to find a solution, we have a situation which is stimulating to thinking. In the clash of ideas one often can see new relationships and new meanings. Much of the learning that takes place depends upon the sort of spirit that

prevails in class discussion. It is here that the art of teaching is much needed.

10. *Are the teacher's efforts devoted to teaching the children how to arrive at conclusions of their own?* The teacher is not so much responsible for forming opinions of the questions under discussion as she is responsible for teaching children *how* to form opinions. Her attention should be given then more to the class process of working than to the putting over of some definite point of view, even though the latter be a worthy one.

III. Suggestions for evaluating procedure where the class period is devoted to enjoying some products in the field of beauty

1. *Are the children coming in contact with the beautiful under conditions that are so satisfying that they want more?* Readiness for more music and poetry comes out of satisfaction in coming in contact with such. The more this occurs, the more will children want further experiences of this kind. Thus the three laws of learning: (*a*) *readiness* for art products; (*b*) *exercise*, practice in responding to art products; and (*c*) *satisfaction* in such responding, are here working. This means that the more the pupil meets art products under favorable conditions the more he will seek more and better art. This suggests why some people have a fondness for classical music, while others, of different sections of the country, very much prefer "Old Black Joe" or "Comin' through the Rye."

2. *Are the children learning through associating with those who like the beautiful?* The corollary to this may be stated in the question, Does the teacher really enjoy the art product being considered? These two questions are but a part of the original question, for association with those who like the beautiful provides some of the satisfying conditions which produce a similar liking in children. With the new emphasis now being placed upon creative education it behooves the teacher to become acquainted with children's literature, and to carry the acquaintance to the place where she can find real enjoyment in the art products suitable for children. The environment of the schoolroom can have much influence in teaching children to like the beautiful. The teacher's taste in pictures, music, and literature, and in line, tone, and color, as used in the room-arrangement, is a potent influence in developing children's tastes in such things.

3. *Are the details, used by the artist to give embodiment to his ideas, meaningful to the children?* The details are meaningful and familiar to the artist. They are commonplaces in situations such as the one he portrays. He is able to look through these obvious details and see the element of beauty which they embody. If it were necessary for him to stop to become familiar with these details, he would probably lose sight of the element of beauty. Where children have to get an acquaintance with the details, they fail to look through them to the beautiful concept of the artist.

This does not mean that the way to teach children to enjoy an art product is to have them learn all the details about the costumes, furniture, or landscape as an essential preliminary to liking the art product. This would be as erroneous a method as the one once advocated of teaching the detailed biography of the author as an essential to appreciation. The point of view is rather that when a situation, characteristic of human experience, has been studied, so that its details are familiar, then the student is ready to enter into the æsthetic interpretation of such a situation. The art product serves as a way of looking at the beauty in such human experience, rather than as a vehicle for teaching some subject matter. It should follow the study of the human experience, but it should not be a means in such study.

4. *Are the children learning technique as a means, or as an end?* The creation of an art product involves the use of technique. One cannot paint a picture without some brush technique. One cannot record his concepts of beauty in sound without some form of music notation. To carve in marble means mastery of some tools, but enjoyment of beautiful art products is not the same as creating beautiful art products. The error has been in assuming that these were identical, or else in assuming that the sole purpose in teaching these art subjects was to make the learners producers, creators of art products. There can be enjoyment without the attempt to create.

When then should technique be taught? When

the learner tries to give body to his own ideas of beauty. He then needs the technique as a means. The learning of technique is clearly for the purpose of furthering his end.

There is another use which may be found for learning technique. When one comes to the place where he wants to seek out more art products but cannot do so because of the lack of technique, as easily becomes true in the field of music, he resorts to learning the needed technique. Such learning promotes gain in liking because it is a means to such liking.

5. *Is there provision for some opportunity to do creative work?* As one tries to give embodiment to his concept of beauty he gets an experience which easily serves as a point of reference in contemplating the art products of another. As he comes in contact with the product of the master he recalls his own efforts, and this gives him some measure of the beauty before him. Every school should provide opportunity for some creative work. This should come as a natural outgrowth of teacher and pupils living together richly and fully. The social situations developing in such living should provide many suitable outlets where such creative work would function. If right conditions prevail, these creative products will come as a spontaneous expression of joy in living thus fully. It is very doubtful if such work ever comes under a program of required production. Such requirement would kill spontaneity, which seems to be an essential in creative work.

Every phase of living takes on some form which is an expression of line, tone, color, and rhythm. This form may be beautiful or it may not. Art asks that in all that we do, we attempt to do in a beautiful way. We learn thus to do as we learn to like the beautiful. We learn to like that which is familiar. Therefore, the way to learn to like the beautiful is continually to live in contact with beauty. The school is able to control environment, and thus is it able to teach the child to like the beautiful because his school life can be in an atmosphere of beauty.

IV. Suggestions for evaluating procedure where the class is attempting constructive, creative work

1. *Is the time used in a way which is justifiable from the point of view of the pupils?* If school work is fully educative, it should have in it time when the individual child may satisfy his own tastes and aptitudes through some form of expression. There must be some medium for revealing to each child his own self-possibilities. He needs to give expression to his ideas, to "try his hand," to realize what he can do and become. This means time for some forms of constructive and creative work. Not all such work is of necessity with wood or paper, or cloth or clay. Some of it may be with ideas or words, or sounds or movement. At such a time one may write a poem, paint a picture, make a piece of apparatus, write a report, or do things of many possible types. The essential criterion for such a period is that the thing being done be that which, to the one doing it, is essential for furthering his end.

This will often mean a period in the classroom when individuals are doing varied things. It is really a period of *unassigned time* — a period set aside for giving every one time for pushing ahead his interests and responsibilities. It does not, however, necessarily mean time devoted exclusively to individual work. The time may be used for definite instruction, to all the class, in the approved method of constructing something which has become the concern of all the group, such as the correct way of sewing the signatures of a book, or of putting the leaves of a book into its case cover, or the accepted way of making bibliography cards, or of binding pamphlets. There seems to be no justification for assuming that because this is a period of unassigned time it is a time when individual work must prevail. If all want to bind some pamphlets and if there is one approved method of doing this, economy of effort calls for showing all or many at the same time.

This is a different point of view from that held by many in the past that work in construction should be dictated. This idea resulted in forty uniform napkin holders, or mats, or pin trays. The point of view here advocated proposes instruction to the class as a whole when their efforts call for a technique which has a uniform procedure according to social usage and, therefore, has a definite teaching sequence. Individuality may still prevail in the use of the technique. It is a time sacred to becoming, accomplishing.

2. *Is the work being done a part of a definite purpose of the individual?* Merely to be busy at something at

this time is not sufficient. Busy work can find no justification in a serious class program planned toward definite objectives. Each child should come to look upon this time as a valued period, because then he can carry his own efforts farther toward realization. In a healthy class atmosphere, children will not be asking what to do at this time, nor will teachers be telling children to do something, but the time will be welcome because it makes it possible for the individual to push ahead in his undertakings. The source of these undertakings is in the living situation prevailing in the class, with the many stimuli to activity which such living creates.

3. *Is there a feeling of responsibility on the part of individuals for the use of this time?* The outcomes of effort in this period should, in some way, obviously function in the class life. Each child should feel responsible to his mates for doing well what he does because all are concerned in the outcome. The poem written by one child is of concern to all, perhaps because it is being considered for the class paper, or perhaps just because the class has become interested in this individual's ability to write. His success is their joy because he is one of them. Because the class has set up definite objectives it is interested in attaining them, and it uses its time to this end.

Thus each member is responsible to the group for the way he uses his time. If he wastes it the group attainment is retarded. If he accomplishes something worth while the group gains. A worthy group activity

offers a variety of things to be done — a variety great enough to give every member a share in its achievement. When an individual undertakes a part of the work the class is projecting, he is then responsible for the success of that part of the enterprise. Learning to feel responsibility in group living is no little thing in the category of desirable learning.

4. *Is the period so conducted as to foster a spirit of individual inquiry and initiative, and to permit of deliberation and thinking?* The traditional period of dictated construction work failed entirely in these respects. Originality and individuality were repressed. Children were not supposed to ask questions. They were to follow directions. Often the end-product was unknown until it appeared in the routine of following dictation. Sometimes the duck in paperfolding was scarcely recognizable when the children were told to hold up the ducks they had made and look at them. The measure of the teacher's success in teaching was to be found in the uniformity of the forty booklets or forty pin wheels. Quantity production seemed to be the goal, whereas to-day individual-becoming is the objective.

5. *Is there time for the individual to refine his product so as to realize his idea?* Such realization is not possible under a régime of uniform procedure. This unassigned time should release individuality so that it will find its own realization.

6. *Does this period result in self-finding?* To the extent that children find out what they can do well,

to that extent will they find satisfaction in doing. Such self-finding reveals needs for learnings by way of knowledges or techniques involved in further effort.

7. *Is there provision in this period for the class to take account of what has been accomplished?* This is necessary if we would develop a spirit of group responsibility or if we would raise group standards. In the approval of one's mates one finds satisfaction in effort, and one finds criteria for judging the worth of his efforts. If what one does is acceptable to his group, he tends to purpose more worthy enterprises.

V. Suggestions for evaluating procedure where the purpose is to conduct a class conference

The art of living with people is needed if one lives well with others. It is learned in properly guided group living. A school organized on this basis is truly a school of social living. In such a method of conducting a school there must be time definitely set aside for the discussion of the affairs of the group, for bringing together individual points of view, and for arriving at concerted judgment and action. Such meetings are needed often enough to promote the development of a wholesome group consciousness that will insure progress in the enterprises undertaken. What are some of the evidences of a good group conference?

1. *Does the object of the conference seem to be clearly in the minds of the children?* This recognition is evidence of the sincerity of the group in trying to attain their objectives. Without a clear understanding of

what they are trying to do, there is danger that such a period will resolve itself into mere formalism.

2. *Is there a definite plan of procedure?* Group discussions without a definite plan may easily degenerate into mere talk. There must be an effort to move ahead toward accomplishment. No leader of a group discussion can hope to bring the group to concerted action unless he himself has a plan of the steps involved in arriving at such action. Children should be taught that such responsibility rests upon the leader, and that good leadership involves keeping the group consciously working in accordance with a plan. This means that the time should come when they will seek to learn to follow parliamentary procedure, and that such procedure will be sought as a means toward accomplishing their ends with greater efficiency. In no sense should the learning of parliamentary usage be the end, and the group conference the means.

3. *Have the children tried to break, into its essential elements, the task to be accomplished in the conference?* This means ability to analyze and to see relative values. Development of such ability will lead to talking to the point, and will help to eliminate tendencies on the part of some individuals to wander from the question in hand.

4. *Are the children learning how to organize group planning and decision?* If group conferences are rightly handled such learning may be in time expected.

5. *Is there a definite spirit of coöperative concerted action?* Are the children learning that there are some

things that can be attained only by group action? Are they learning to value group strength? Are they learning the implications for the individual in thus participating in group action?

6. *Is the spirit of the class toward individual opinion and individual contribution such as to encourage each individual in exercising freedom in thinking?* If group action and opinion are to be worth while, individuals must be free to give the best they have and not fear the disapproval of mates.

7. *Is there evidence of growth in group consciousness?* There should be awareness of individual points of view and points of strength. This awareness may in time manifest itself in a wholesome class pride, a pride based upon knowledge of strength and purposes.

The importance of sincerity in group effort. In the older notion of the recitation the teacher dominated. She decided what was to be done and she saw that it was done. This was consistent with her belief that it was her business to see that the recitation was devoted to fixing something in mind, or to proving that one had fixed the thing in mind. The new values which are being recognized in school work have made for disapproval of this autocratic point of view. Dispensing with this dominance has left some teachers in a quandary. As a result, we have had instances of teachers who catered to the children or who attempted to amuse them. Others have thought they were to use devices to trick the children into learning a prearranged subject matter. A few, however, have had the concept

that the teacher should lead the children in a sincere, frank facing of the situation in which they find themselves to the end that they may get most profit from it.

The insincerity sometimes found shows itself in the way some teachers have attempted to use the reporting method, in the massing of subject matter in relation to a topic under discussion. Such teachers have grasped the idea that textbooks often give a meager amount of detail, and they send the children to various sources for data. When the class comes together for reporting what they find, all too frequently it happens that the children are content merely to stand in turn and tell what they have found. The telling may be meager and quite inaccurate. Opinion and guesses may be mixed with fact. There may be an utter absence of proof. In such work we often see inaccuracies go unchallenged, either by the teacher or the children. Such work seems to be content to substitute the *form* of reporting for the *sincere* effort to get the truth. Such a method not only fails to teach facts or proper method of study, but likewise it fails to teach the children the value of truth, of sincere effort to get facts, and of respect for ability to gather facts and organize them in their true perspective.

Too many teachers resort to the devicive, the make-believe, in an effort to get children to learn without their definitely putting forth the effort to master. Children need to learn the satisfactions of gripping the situations that confront them, and of frankly, sincerely

meeting them. Every recitation period should have such a spirit dominant.

The province of the teacher in a recitation. Observation of classroom practice to-day raises some questions in the mind of the visitor. The prevalence of flash card material and busy-work devices, the frequency of word drills and number exercises, the spending of much time in writing words in spelling under teacher dictation, the frequency of reading periods where the work consists of reading in turn from a common text, and the amount of passing of slips of paper for "doing" some formal assigned exercises which seem to have little connection with the children's experiences, these together raise a question as to how valuable is the presence of a trained teacher. Could not a skilled school-keeper do all these things? Where does real teaching come into the schoolroom procedure? What is the essence of genuine teaching? What values are to be derived from group work which cannot be secured from individual study? How does the teacher function in getting these values?

Some values in the teacher's guidance in group learning. One factor that should be used in group learning is the conference. After each individual has done all he can alone, the conference period may be valuable in augmenting his efforts if the conference includes the practice of pooling the results of each individual's effort. In this pooling the teacher's guidance should be helpful in teaching the children how to keep their contributions organized. As vary-

ing points of view are thus brought together, differences will appear. In this clash of opinions individual thinking and effort may be furthered. Skill in teaching is here needed to guide the discussion arising from these opposing ideas so that, instead of blocking each other, they may together give impetus to further effort.

A skilled teacher not only guides in this pooling and evaluating of varied experiences, but she supplements children's efforts by revealing sources of further data and opening avenues of interest which they have not discovered. Her wider experience and greater acquaintance with the field enable her to recognize omissions and failures to keep a true perspective. Her better acquaintance with the techniques of study enable her to instruct the children at points where their techniques are inadequate. Her vision of possibilities and meanings should make it possible for her to stimulate further purposing and effort.

Summary. The old meaning of recitation no longer fits the schoolroom procedure. The recitation is the time when the group do together the things that can be accomplished together better than individually. The kinds of things a group will do together include: (1) the acquirement or strengthening of a habit or skill; (2) the attempt to understand a challenging situation; (3) the enjoyment of beauty; (4) the attempt to do constructive, creative work; and (5) the conduct of a class conference. Each of these procedures should be evaluated in terms of applications of the laws of learning to such situations. In all class work there should

be a sincere meeting of the situation which confronts the group, and a definite effort to effect the desired changes, under the skillful guidance of the teacher.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. Get the program of a class you have recently visited. Rewrite it in terms of what the *children* do each period of the day.
2. Recall those recitations you have seen recently. Point out those things which were accomplished which could not have been achieved if each child had worked by himself. What evidences did you see of group exchange or sharing? Did individuals delay the group and so cause some to waste time?
3. In a lesson where there is reading in rotation from text which all the children have previously read, how much practice in oral reading does each child get? What value is there for him when he is not reading aloud? When would you justify such a class activity, assuming that justification implies that every child is profiting throughout the period?
4. Name five periods you have seen spent in drill where you were sure it was the purpose of the learners to master the thing practiced. Find if you can why they so wished to acquire this mastery. Did you notice any evidence of intensity of the desire to master? Can you find any suggestion as to when one may expect great intensity?
5. At what age may children be expected to give the source of data contributed in a class discussion?
6. How many instances can you recall where you have seen children giving, from other source than the text, specific proof to support their statements?
7. How would you suggest that one might teach children to avoid irrelevancy in discussion?
8. What bearing does the practice of discussing current

happenings have upon the tendency of a class to bring in trivial or uninteresting data? To talk irrelevantly?

9. List several sorts of class activities which will promote learning to like the beautiful.
10. How can a class paper promote growth in appreciation of the beautiful?
11. Where should a bulletin board be placed in a classroom? Where should pictures be hung?
12. Give reasons which will justify the practice of putting children's work upon the wall. How many samples of an exercise should be put up? When would you post only one? When would you post all?
13. List learnings of children which have so much repetition in necessary use that no drill exercises are needed for fixing the learnings.
14. List learnings needed by children which have only occasional use and, therefore, drill exercises are needed for fixing them.

CHAPTER V

GUIDING THE LEARNING OF SUBJECT MATTER

What is subject matter? — Three views of subject matter — Subject matter as related to child experience — Child experience and race experience — Province of the school in developing experience — The qualitative aspects of living and learning — The early isolation of school subjects — Herbartian influence — Herbartian beliefs — Correlation and concentration — Reaction from correlation and concentration — The activity program and the theory of integration — The subjects of study under this theory — The place of induction in the mastery of subjects of study— The place of subjects in school learning.

Summary — Suggestions for thought and discussion.

What is subject matter? The answer one gives to this question is an indication of his point of view as to what learning is, how it takes place, what the function of the school is, and what its product should be.

Three views of subject matter. To those who regard the school as the place where one goes primarily to master certain prearranged specified learnings, subject matter consists of these prescribed learnings. To such people mastery of subject matter constitutes the end, the goal of school effort. By mastery they usually mean ability to reproduce it. The process of learning is largely memorization. The name of the mountain, its location, height and characteristics are facts in geography to be learned. One goes to school to learn these facts.

To those who believe the school is a place which

provides phases of living needed to round out life into a well-balanced whole, the process consists of a series of activities in which the learner engages. The subject matter is that which he needs to carry on these activities. He gets it because he needs it as a means in attaining his ends. Learning comes largely through gathering the subject matter needed and using it in the achievement of life purposes. At times, when the learner finds that a certain process or a certain bit of information needed is extremely valuable in the particular activity, he may drill upon it and fix it for future use. This is because the immediate use does not give sufficient practice to insure retention: hence the drill. Such a point of view regards subject matter as a means, derived as a by-product of doing.

If it is proposed to climb a mountain, one must know where the mountain is, its accessibility, how high it is, how steep the climb, how long it will take, and what value there is in climbing it, in so far as these facts are available. If one reads about such a mountain climbing expedition, to understand the reading he must get these facts, or he may, in the process of reading clearly, get them as a by-product. The facts about the mountain are a means toward carrying out the activity of climbing, or they may be gathered as a means of understanding another's experience.

Some leaders of educational thought focus their attention in the educative process upon the outcomes or results of doing. They look for the change in what the child does after the experience, for they believe learning

is changing old responses and forming new ones. The product of the learning, consisting of these responses learned, is the subject matter. Hence, they say that subject matter is the way of behaving learned in experience. After one has had the experience of climbing a mountain, he behaves differently toward pictures of mountains, narratives of mountain climbing, or proposals that he climb a mountain. Or, after he has read an interesting narrative of a mountain-climbing expedition, he makes a different response to other narratives or facts about mountains. The subject matter, in either case, is the conduct he acquires from the experience. This subject matter includes knowledges which affect what he does and thinks, skills and habits acquired in the doing and useful in future doing, and attitudes and appreciations formed by the experience and having much to do with shaping future conduct.

This third group of educators is concerned with *all* that takes place in the learning process, more than are the educators who look upon subject matter as that which the school sets to be learned, or those who look upon subject matter as a means toward completing the activity. They are particularly concerned with the habits, attitudes, and appreciations being formed.

Subject matter as related to child experience. To one who looks upon subject matter as the behavior-patterns or controls learned in experience, subject matter is continuously being learned. Whenever the child is doing something, he is learning that which modifies his further behavior. This point of view

makes subject matter a very complex affair, something not wholly within the control of the school, but, while the school cannot control all the subject matter learned by a child, it must take account of it because all of it enters into the problem of shaping further conduct and learning. What a child does to-day is affected in large measure by what he has done. In school activities he is not particularly concerned with limiting his behavior there exclusively to those patterns previously learned there.

Experience to the child is a unified thing. Professor James spoke of it as "a stream of consciousness." Professor MacVannel spoke of it as a *continuum*. Professor Dewey has spoken of it as an "ongoing activity," asserting that "the child is always already doing something." He calls it growth if it goes in fruitful directions. Professor Kilpatrick has called our attention to the fact that one activity leads to another activity, and has shown that if each new activity is better and more far-reaching than its predecessors, the process is good, it is educational.

The educative process is, then, concerned with a child's total experience, his total learnings, his present and potential behavior. For this reason the school must know the child's home life, his play life, his community life, and all the environing conditions. The school that would guide the child's experience must include, in its activities, enterprises which reach out into the community. The school life must articulate with the community life. Its subject matter cannot

be limited to book-learning. Its process cannot be limited to memorization of facts and drill on book skills.

Child experience and race experience. Some would define subject matter as race experiences to be learned. Child experience and race experience are two aspects of the same thing. If the former is sufficiently rich and varied it will, in time, represent a significant portion of the race experience. The child's experience with books brings him into relation with some phases of the race's achievement, in the age-long effort to record its experiences. The child's experience may be extremely meager, limited only to learning to read a primer or a first reader. In this he may get no notion as to how his primer was made in the publishing house, how it came to be made that way, of what it is made, whence the paper came, or who wrote the stories in the book, or devised the letters used to make the words. The book is the outcome of a long series of race experiences. The more the child's experience enters into the meaning of books the richer his contact with books, and the more does his experience enter into race experience. With this greater meaning of books come changes in his behavior toward books.

Province of the school in developing experience. As has already been pointed out, it is the province of the school to see that the developing experience is as worthy as possible. This means that it must be rich and many-sided, inclusive of as many as possible of the desirable aspects of life. It must be increasingly

efficient. Living well should bring increasing ability to live better because the skills and efficiencies of living are gradually becoming mastered, and it further implies that right interpretations of these living experiences must be made possible. Fine attitudes and appreciations come out of looking at experiences in the right way. Such desirable interpretations are furthered by finding how others interpret similar situations.

If we analyze the work of the school in developing experience we may classify it into the following aspects:

I. Developing many rich and varied experiences:
   1. With the physical world as it affects people and living
   2. With people as they meet the problem of group living, in family, community, and State
   3. With the work of the world in
      a. producing raw materials
      b. manufacturing commodities
      c. transporting and selling commodities

   to the end that living conditions may be better

II. Developing the skills and abilities to further experiencing, including the ability to
   a. read
   b. write
   c. express one's ideas in language
   d. meet quantitative situations

III. Furthering interpretation of experience through acquaintance with
   a. music
   b. literature
   c. art

   the accumulated, æsthetic interpretations of life experiences.

The qualitative aspects of living and learning. Throughout this work of the school in promoting child growth through the right kinds of experiencing there are certain qualities that should be continuously sought. (*a*) There should be a quality of *health* permeating all that children do. This should gradually become recognized as essential in any program of worthy action. As consciousness of it is developed the children should learn how to provide for health in living. (*b*) *Efficiency* should, likewise, come to be recognized as a quality essential in any worthy endeavor. Children can learn to value efficient effort. As they learn to purpose more genuinely and worthily, they will value successful effort and seek to secure it. Then will they welcome helpful suggestions as to ways of developing efficiency. (*c*) The *social quality* involved in group living becomes more and more apparent as group consciousness arises, through the development of group enterprises. As the child sees the evaluation of his efforts toward furthering the group undertakings he becomes conscious of the force of group opinion and learns to consider the social significance of his own conduct. (*d*) The *æsthetic quality* is involved in all that one does. As his efforts take form they express line, tone, color, balance, rhythm. He cannot escape this inevitable revelation of his notions relative to composition. Every time he leaves his bedroom he is an art expression to his fellows. Everything he does indicates his æsthetic judgments. To teach better judgments means a continuous attention

to the situations one is meeting. Practicing better choices produces a better æsthetic quality in living. (*e*) The *creative quality* should be given opportunity in all one's experiencing. In each thing one does the self is involved. Work should be so guided that the self has much opportunity to be realized.

This continuous process of self-expression, of making choices, and of arriving at decisions should make for the emergence of a sort of individuality that is conscious of its abilities, its tastes, and its purposes, as well as its needs and deficiencies. The process of education in a very real sense should be the process of self discovery.

The early isolation of school subjects. Such a statement of the factors involved in the work of the school should not be interpreted to mean that the factors are developed apart from each other. They are aspects of experience and are, therefore, closely related. The nearer they are developed in relationship to a unified whole, the more complete is the learning. They were closely related in the informal, household learnings of colonial days. The effort at schooling which gradually developed was an effort to teach some definitely organized knowledges and techniques which were useful in furthering living. Because they were taught in school, apart from the situations calling for them, these organizations came to be regarded as separate subjects.

Herbartian influence. The tendency to teach separate subjects increased as more subjects were

added to the school task. Thus we find the earlier program consisted of reading, writing, arithmetic, and spelling. These were augmented later by the addition of geography, history, nature study, and manual training, as separate subjects.

The tendency toward separation of subjects was sharply checked in the last decade of the last century by the Herbartians, who brought to this country a theory of teaching and learning which did much to vitalize school work. The particular doctrines which assailed the custom of teaching subjects in isolation from each other were those of correlation and concentration.

Herbartian beliefs. The doctrine of concentration was built upon a psychology and philosophy taught by Herbart's followers. One of these beliefs was that each individual child, in his own life, lives through successive stages which are the same as the stages the race has come through, and that these are lived in the same order or sequence. This was the recapitulation theory. Another doctrine was the theory that the child's education is best promoted by giving to him, at each stage of his experience, the culture products which the race produced at the corresponding stage. This was the culture-epoch theory.

A third theory was the belief as to how learning takes place. It was believed that the individual becomes or grows by what was known as the architectural theory. His original nature was thought to have one outstanding ability — the ability to resist

the impacts of the things it encountered — and as a result of the resistance there was left attached to the individual an *idea* of the thing it resisted. This idea, likewise, could resist contacts and thus acquire ideas. In addition, an idea could attract to itself things like itself. Resisting these tended to add more ideas like itself. If the teacher were fortunate enough to get the individual to acquire an idea of the desired sort, the new idea would go to work acquiring more of its kind. Thus the individual would in time become an accumulation of ideas of the desired type. This theory of child development postulated the doctrine that the teacher could make of the child almost what he would by presenting to him the right sorts of materials for him to resist.

A fourth belief was the conviction that the State should make of the child what it wished in order that the child could best serve the State. This was to be done by presenting to the child the material best suited to building the right ideas.

Concentration and correlation. The Herbartian program, then, involved the selection of material to be presented to the child, material best suited to build ideas needed for making him a suitable citizen of the State. The central core of this material tended to be the history of the State and the Church. Teaching consisted of breaking this material up into proper units, or "method wholes," and presenting them in such a way as to get the best resistance possible in order to build the desired ideas. All the teaching

centered around this central core. Therefore, we find Herbartians tended to regard historic and literary material as the central core, and had other subjects taught in relationship to the core. This was the doctrine of concentration.

The doctrine of correlation was like the doctrine of concentration in that it insisted upon teaching subjects in relationship to each other, but it denied the supremacy of a central core. Therefore, we find many Herbartians advocating the correlation of subjects. When teaching the westward movement in history one must teach the geography of the Southern Appalachians and of the Ohio and Kentucky lands. At the same time, the animals of the forests should be taught as nature study, and the arithmetic should consider numbers of people going through the Cumberland Gap, numbers of miles traveled a day, numbers of wild animals killed, etc. Sometimes the insistence upon correlation stressed not wholesome, but really absurd relationships, where the teacher made forced, unnatural connections between subjects.

Reaction from correlation and concentration. The doctrine of correlation was well established in this country by the beginning of the present century. With the increasing tendency to make artificial and forced relationships, there arose an antagonism toward the doctrine. This antagonism was coincident with the beginning of a psychology of specific responses to stimuli, a psychology which gradually dispiaced the Herbartian psychology of individual development.

Therefore, before the end of the first decade in this century, the doctrines of correlation and concentration were in disfavor. Some even considered it improper to speak of relationships between subjects.

The activity program and the theory of integration. The second decade gradually brought in new factors which paved the way for later consideration of a new point of view. Professor Dewey's teaching and the new psychology have been increasingly turning the attention of teachers to child life, and to its interests, and tendencies. Many students to-day are beginning to center the educative process around child activity. Study of what children do under wholesome, stimulating conditions seems to point to some significant factors. Children are not interested in subjects, as such. This interest is acquired, and often does not appear until later. Children seem to regard all experiences as integral parts of one total experience — "the stream of consciousness," as Professor James called it. In meeting a situation, children draw upon any relevant past experience, regardless of where they had it or with whom. All previous experiences are theirs to use whenever and wherever needed. Children learn what they do. They learn it only when they practice it. They are doing all the time. The problem of teaching is to guide the doing into worthy and fruitful channels, so that the learnings will be valuable.

All these considerations have caused some leaders to organize their educational procedure around an activity program. The learnings are conceived of as the

outcomes of the things the children do. The things the children do together constitute a wholesome, well-balanced program. Such a theory is sometimes spoken of as a theory of integration — that is, all the learnings are integrated and unified around wholesome living.

The subjects of study under this theory. With this theory of integration, subjects are not taught as ends in themselves. They are learned as they come in the series of activities. This does not necessitate leaving the children to chance, fragmentary, unrelated learning. The work of the teacher calls for better guidance than this. She must know the children's activities and all the learnings involved in carrying them out fully. She must see to it that each learning is related to kindred learnings of past experiences. All this means gradual and continuous organization of experience. The various sorts of learnings in time grow into organized bodies which one may legitimately call subjects. The child thus, eventually, comes into a knowledge of the subjects of study. The knowledge takes logical organization as the child continuously articulates new learnings with previous, similar learnings. As adult life approaches, he comes to have adult organizations of subjects, which are usually thought of as more or less complete organizations.

The subjects are largely adult organizations of the various aspects of experience. They have their source in life, but they are best learned in relationship to the learner's own living experiences. The learning process should be psychological, in terms of the learner's

living. The learnings should be continuously articulated with kindred previous learnings so that, in time, they come to have logical organization, and the various elements come to be in proper relationship to each other and to the whole. Thus subjects emerge and become possessed of significance for the one who so masters them. Such mastery of subject matter means that it has functional value in giving richness to life.

The place of induction in the mastery of subjects of study. A study is a comprehensive body of related truths organized around some aspect of experience. These truths are to be found underlying this aspect of experience, no matter how varied the setting. The vicissitudes of life bring us numerous illustrations of varying situations in which the truths are bedded.

In learning to recognize these underlying truths, children must have first-hand experience in which the truths are somehow involved. This may be very meager experience. It can and should be supplemented with much vicarious experience which gives added illustrations of the truth as working. When enough experiences of a sort have occurred, the individual will begin to recognize the common elements. In time he will pull these out, put them together into a unity, and then *see* the underlying truth. This is the process of induction. Children vary in the number of experiences they need to have before they begin to see the common factors. They vary in their ability to pull out and study the common elements. Some never *see the truth*. They, therefore, vary in their

ability to make inductions. All can have the first-hand experiences in some degree. A good school brings to all much vicarious experience to supplement the limited first-hand experience. All can help each child to go as far as he can in making inductions.

A series of inductions about an aspect of life, if rightly related, will tend, in time, to take shape as an organized body of truths or a subject. The child's awareness of the subject comes gradually as the increasing number of inductions take on organization. In a true sense we may say the subjects emerge upon the child's consciousness. To the little child, subjects are not important except as he hears adults talk about them. The child is interested, rather, in how people live and what people do. He wants much detail about people, and many different kinds of people, present and past. The order of learning seems to be: (*a*) Have first-hand experience, (*b*) plus vicarious experience, (*c*) plus more first-hand and vicarious experiences until one has enough to (*d*) see the common factors; then (*e*) pull out and study these common elements, (*f*) see the truth, and (*g*) put this truth with kindred truths, until (*h*) the subject emerges as an aspect of experience.

The place of subjects in school learning. The outline given in the early part of this chapter suggests the province of the school in developing first-hand and vicarious experiences. As inductions emerge from these experiences it is believed the child will come into bodies of truths which he will, in time, recognize as subject interests. The experiences with the physical

world, as it affects human living, will lead into geography, nature study, elementary science, general science, and later still into physiography, geology, astronomy, botany, zoölogy, hygiene, and the other sciences. The experiences in learning to live with people will lead toward the meaning of history, civics, and sociology. The experiences with the work of the world will gradually reveal industry, agriculture, mining, fishing, lumbering, transportation, and commercial activities as aspects of life. The needed tools of experience will gradually come to be recognized as reading, spelling, arithmetic, language, and writing. The æsthetic interpretations of life will gradually become music, literature, and art.

In other words, we may say that the school work should begin with detailed first-hand experience which should be supplemented by much rich, vicarious experience. From these will come inductions which will later become so organized as to emerge as subject interests.

Closely integrated work should constitute the work of the early grades. Subjects should emerge gradually. Just how early subjects should be differentiated is a question for careful study. Some evidence seems to suggest some differentiation in the third grade. Some evidence suggests the seventh grade as a level when much differentiation is advisable. Some high-school trends are pointing toward more integration there than has obtained. A little experimentation with integrated work upon the college level is being at-

tempted. Probably a varying time of emergence of subject interests will be found desirable. Integration at the early levels is rapidly gaining acceptance. Subject interests seem clearly secondary to much detailed, first-hand, and vicarious experience in the field of human living and doing.

Subjects are organized bodies of truths which emerge out of detailed experience through the process of induction. The work of the early grades should be integrated, and it should deal with much first-hand and vicarious experience with how people live and what people do. The points at which subjects emerge are probably varying because of individual differences, and differences in kinds and numbers of experiences.

Summary. There are three prevailing notions as to what subject matter is. These are: (*a*) The prescribed learnings of the school, (*b*) the material needed as a means of carrying activities through to successful issue, and (*c*) the ways of behaving one learns in experience. Each point of view reflects the theory of the educative process held by its sponsors.

The goal of the series of child experiences is the gradual induction into the race experience, to enable the child to identify himself with life in its richness and fullness. It is the business of the school so to order the experience process that:

1. The child may have many varied, rich experiences with the physical world, with people, and with the work of the world.

2. That the child may continuously acquire in-

creasing efficiency with the tools of experience, reading, language, spelling, writing, and arithmetic.

3. That his interpretations of his experiences may be influenced by the æsthetic interpretations of music, literature, and art.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. Give the steps by which a child learns the meaning of public property, right of way, community coöperation.
2. What subject matter is involved in studying the problem of fire protection? How much history is involved? How much science? How much arithmetic?
3. If a group of children make a model of a castle, is it helping in their study of history, literature, art, geography, or industrial life?
4. Make a list of situations where a class would gather and learn subject matter as a means toward furthering chosen ends.
5. With completely integrated work what sort of a daily program would you have? Would you have special teachers? If so, what would they do?
6. To how many teachers should a group of children be responsible?
7. What subject matter is acquired by a child in learning to put on his overshoes, to care for his working materials, to buy Christmas presents?
8. What does knowing that in 1492 Columbus discovered America have to do with conduct?
9. What can the school do to develop the child's experience relative to the source of the city water supply, the meaning of clay, health service to the community, the service of the weather bureau?
10. Watch the work of a class for a period. Note evidences of learnings which will promote the development of the quality of efficiency, of health, the social

quality, or the æsthetic quality. Do you find any evidences of the creative quality in the work?

11. Can there be any creative quality in learning long division? In gathering and organizing data for a class report? In arranging flowers in the classroom? In putting notices on the bulletin board?

CHAPTER VI

THE CONTENT OF THE SOCIAL STUDIES

1. *Conditions of the physical world which modify man's living experiences* — Climate, location, soil — Natural resources.
2. *Conditions involved in living with people* — Impelling needs and desires — Rivalry of interests, and control — An understanding of peoples — Curriculum content.
3. *Conditions involved in supplying the needs of living* — Man's problem-solving ability — Man's most fundamental needs — How the child is to understand his environment — Transforming the raw materials — Understanding fundamental processes — Selection and use of materials — Underlying scientific principles — Economic, social, and æsthetic factors — The process of distribution.

Summary — Suggestions for thought and discussion.

Definition. The study of the conditions affecting human living may fittingly be called the social studies. Anything which promotes ease of living, better group relationships, greater physical comfort, and greater satisfaction in doing the work necessary to provide the conveniences and necessities of comfortable living for man, may truly be called social. Experiences which will promote understanding of these living conditions, and appreciations of their possibilities, efficiencies, and knowledges adequate to make worthy living possible, are suitable school work, providing they are experiences fitted to the child's tendencies and abilities.

The social studies have to do, then, with those considerations affecting human living which are involved in (1) contact with the physical world and its laws; (2)

contact with people, and the laws which operate in the attempt of people to live with people; and (3) contact with the work of the world and its laws in (*a*) procuring and producing raw materials, (*b*) manufacturing these raw materials into more useful commodities, and (*c*) distributing these materials and commodities to the people who consume them.

1. *Conditions of the physical world which modify man's living experiences*

Climate, location, soil. How one does things is influenced by the weather. Storms interfere with many activities and modify many others. Sunshine makes possible certain enterprises while moisture, or even cloudiness, is essential to others. The damp atmosphere of England has had some influence in the development of the cotton industry. Winds, temperature, and precipitation are of concern in man's affairs. Prevailing winds affect sailing, the style and location of houses, and the amount of rainfall. Temperature and precipitation exercise real control over man's agricultural efforts.

Situation, including distance and space, has to do with modifying man's living. Latitude and altitude affect climate and possible occupations. Nearness to bodies of navigable waters, to available sources of clean water and food supplies, and to centers of travel modify man's industrial activities and his human relationships. Other men want clean water and food, other men travel over the same water routes, and other

flocks and herds need to be pastured where there is food and water. Therefore, social problems arise. By combined effort men can bring water from great distances, build roads over mountains, mine coal out of the ground, grow a variety of products, ship commodities to various places, and provide means of travel over great distances.

Surface and soil constitute a significant factor in human life. The contour of the land makes travel pleasant or difficult, makes agriculture laborious or comparatively easy, and makes the landscape interesting and inspiring, or deadly monotonous. The kind of soil makes possible the variety of activity. A sandy soil supports one kind of crop, while a forest loam feeds different types of plants. The constituents of the soil, including lime, humus, sand, clay, phosphorus, iron, and other minerals, determine largely what shall be grown. The story of the earth's history, as written in the soil, is adding much to man's concern in the story of the universe. The influence of the scenery, mountains, valleys, streams, plains, oceans, lakes, and clouds upon human life is not little. The sunny skies of Italy, the mountain fastnesses of the Alps, the broad stretches of the prairies of the Middle West have been of recognized influence upon men's conduct. The soil and surface features have had much to do with shaping a nation's dietary habits, customs, beliefs, occupations, manner of living, and faiths, as well as its relationships with other nations. Wars, religions, manners, customs, ideals, foods, clothing, houses, art, and in-

dustry are all to be understood, in part, in terms of the influence of soil, climate, and surface features.

Natural resources. The resources of a country have much to do with the kind of life developed there. The earth products determine many of the industries. They are to be considered as one factor in determining the kinds of houses built. The igloo of the Eskimo, the adobe house of the Mexican, the bamboo house of the Filipino, the sod house of the Kansas settler, the log cabin of the pioneers, and the skin tent of the Arab were all, in part, what they were because of the material available in the given country. The forests lead to lumbering and the gathering of gums and saps. The mineral deposits lead to gold, silver, lead, tin, and copper mining and to the establishment of smelters and foundries. The presence of coal deposits leads to the building of factories. Likewise, the animal and vegetable life of a country support its population and shape its dietary habits. There seems to be some recent, scientific evidence of the influence of diet upon stature. Further, these animal and vegetable products furnish the materials for clothing, and have something to do in shaping national costume and in making and furnishing houses. The art motifs of a people are, in part, to be traced to some of the animal and vegetable products of their environment.

The various water forms shape life in a vital way. A maritime people has characteristics, coming apparently from the long experience with the hazards and joys of contact with the sea. Mountain streams

furnish motive power. Great rivers make navigation into the inland possible. Lakes provide food, scenery, and water for irrigation and for household use. Ocean currents have much influence upon climatic conditions of life.

The health of a people depends upon understanding the laws of the physical world as they affect the body. The influence of sunshine, temperature, winds, scenery, quiet, proper diet, bathing, sleep, and exercise are all related to the conditions of the physical world. The control of germs, the avoidance of contagion, and the wise use of bacteria must be understood if one would live with an efficient body.

The effect of beauty of landscape, of color and sound in nature, of height, distance, grandeur, and sublimity — are all factors of the physical world which enter into the making of life.

2. *Conditions involved in living with people*

Impelling needs and desires. Man, by nature, likes to be with men. It is well that this gregarious tendency is so strong in man, for this earth has not enough separate islands to supply the need if men should desire to live alone. This living together has advantages and disadvantages. To understand these we need to consider some of the forces and forms of social life.

What are the forces that impel men in life? Why do people continue putting forth effort? To answer completely we shall have to wait for psychology and

philosophy to go farther in their researches, but we can list some of the needs and desires which have a compelling influence.

Prominent among the needs and desires is the need for food, clothing, shelter, and protection from dangers. Then there is the desire to have a family, the desire to adorn one's self, an intellectual curiosity which prompts man to continue going farther in his search for truth, the desire to communicate and to record experiences, the desire to possess the things one likes, and delight in the stimulation coming from variety. All of these needs and desires operate, to some degree, in keeping men active. The satisfaction of these for one individual involves the satisfactions of others. Many people cannot be satisfied except as men combine efforts and use concerted action.

Tendencies to combine have given rise to various forms of social life. Thus have developed the family, the tribe, the clan, the village, the State, the Nation, the church, the school, the factory, the labor union, the World Court, the League of Nations. By combining, men are able to apply greater strength and resources and to bring into action a greater variety and evaluation of ideas. By combined effort a town can bring a supply of fresh water from a distance, provide protection from fire and robbers, develop streets, build bridges, have a daily paper, have a great variety of foods, maintain schools and churches, and keep up parks, libraries and playgrounds.

Rivalry of interests, and control. Of course, in

living in a community, there are disadvantages arising from the presence of numbers. Space is more crowded, sunlight is put at a premium, personal tastes may prove a nuisance to neighbors, there is danger from contamination and contagion, and clean food and water are more difficult to secure. These disadvantages show themselves in rivalry of interests, and bring about the necessity of regulation. Sometimes this attempt at control has been in the interest of one or a few and we have had a tyranny or an oligarchy; sometimes there has been the attempt to regulate in the interests of all and we have seen democracies taking form.

Various forms of control and protection have been tried out by the peoples of the world. Some have been valuable because they have contributed to the world's knowledge as to how best to secure the desired results. What we need to know to-day is the way to regulate community life to secure the outcomes we believe desirable. Much help in learning how to guide our affairs can be gained by considering the efforts of other peoples, present and past, in trying to secure these same or similar ends. For this reason we study the social forms of other peoples of to-day and of the past.

An understanding of peoples. This study of the forms and forces of social life should be such as will lead to some understanding of life as the people studied live it. It should include questions as to how the people live, what they do, what they believe, and what are their aims, ideals, customs, and appreciations. In order to understand these we may need to consider

the geography of their country, climate, scenery, resources, houses, foods, clothing, ceremonies, customs, work, art products, education, and writings and other records. We should know the limitations imposed upon them by their environment, and the opportunities it offered. In all this it is important to get facts in their proper perspective, and to see the facts in their relative significance.

In our effort to understand the conditions of life today, to explain how these conditions came to be, and to secure guidance in shaping our affairs, we need to study many peoples. There is no scientific evidence available at present adequate to give guidance in determining what peoples to study. Examination of the better new curricula reveals only the present opinions of some leaders as to which peoples are deemed most helpful. The selection we must make, in the absence of scientific evidence, can be guided by keeping in mind (*a*) the outstanding problems of group living that need consideration, (*b*) the nations that have made contributions by the way they have met these problems, and (*c*) the phases of present problems appealing to the children for whom selection is made and the phases of a nation's story suitable to these children's study.

A phase of curriculum content. The tendency seems to be to make selections of varying amounts from the stories of the following peoples:

1. Primitive peoples.
2. Ancient civilizations, including Arabs, Hebrews, Egyptians, Greeks, and Romans.

3. Certain old civilizations, such as India, China, and Japan.
4. European forms of living, such as Feudalism, Monastic orders, Guilds, and the Church.
5. European peoples of the Middle Ages and earlier, as the Franks, Goths, Northmen, and Saxons.
6. Modern European peoples.
7. Discoverers and settlers of the new world.
8. Colonial America and pioneer life.
9. The American Nation.
10. Other American civilizations, as the Indian, the Mound Builders, the Eskimo, the Peruvian, and the Mexican.

Some curricula use a wide range of selection from this list, while others limit the work in the elementary school to stories of the American Nation only. There seem to be good reasons for no longer limiting the work, in this way, in the elementary school to stories of America only. Recent developments in means of travel, communication, and commerce have been breaking the barriers that separate peoples. With the world interest in aviation which finds it difficult to regard boundary lines, and with the radio which is connecting various peoples with common interests and group thinking, it is doubtful if the elementary school can long continue to ignore the stories of the various peoples who have contributed toward building a world civilization.

3. *Conditions involved in supplying the needs of living*

Man's problem-solving ability. What are the needs of man if he would live a worthy, happy life? Ani-

mals seek food and a place to sleep. These two factors seem to constitute all that is needed to meet their requirements in living. Primitive man demanded little more to satisfy his wants. Unlike animals, however, man has in him a nature which senses difficulties, inconveniences, or unsolved situations, and an inventive tendency which has caused him to devise ways of bettering conditions. This led primitive man to seek a cave as a shelter, keep a fire burning at the entrance and thus shut out wild animals, cook his food in the coals and thus have more savory food, fashion garments out of the skins of animals, make some crude dishes of clay, and make weapons and tools of stones, bones and tough branches of trees.

From being content with mere animal existence, through his inventive, problem-solving ability, man has since come to be an individual who demands food, cooked and varied in kind; clothing to protect and adorn the body; houses that are clean and comfortable; tools and machinery which enable him to do things requiring greater strength and speed than he has, and so overcome distance, space, and, in some measure, time; containers to hold his possessions; and means of recording his experiences. The resources of almost the entire world are drawn upon to-day to supply the needs of an ordinary civilized man.

Man's most fundamental needs. If we attempt to list man's most fundamental needs, we can conveniently group them into the need for:

1. *Foods*, varied enough to keep a healthy body.

2. *Clothing*, to protect and adorn the body.
3. *Shelter*, to protect from weather and enemies, and to provide an abiding place, a shelter furnished, heated, lighted, ventilated, decorated, and kept sanitary.
4. *Records* of worthy experiences, including records in clay, stone, wax, in books, newspapers, charts, maps, and magazines.
5. *Utensils*, the containers to hold one's possessions, including principally those of clay, skins, wood, metals, and vegetable fibers.
6. *Tools and machines* for facilitating man's limited strength and speed, such as hand tools like the hammer and saw; means of travel such as boats, carts, automobiles, and airplanes; instruments of communication including pencils, pens, typewriters, the telephone, the telegraph, cables and radio; and power machinery made possible through the gas engine and the dynamo.

It is in the development of better understanding of what is fundamental in these that we may hope to do much in the socializing of the child. Understanding something of the work that is done to provide these conveniences ought to promote social consciousness; sensing something of the creative achievement in devising these processes and securing products ought to promote a profound respect for human achievement.

To meet these needs three steps are usually involved: (*a*) The raw materials must be procured, (*b*) these materials must have work put upon them to make them more useful in meeting man's needs, and (*c*) they must be distributed to those who consume them. If each individual were to attempt to supply his own needs, he would fail in the attempt because the variety of materials and processes, and the great distances

from which these materials are drawn, would make it a physical impossibility for one man even to assemble the materials, wholly aside from doing the work of changing the materials into the needed commodities. Co-operative effort provides the only way of meeting the needs of civilized man. A single worker limits his efforts to a small part of a process, but does what he does in quantity. This quantity production necessitates a system of distribution and of compensation of the workers. Thus have arisen the big problems of the industrial, commercial world.

How the child is to understand his environment. In order that a child may articulate in such a complex, industrial, commercial environment, he must have a series of experiences so guided as to enable him to understand the underlying essential processes in this complexity. What are these underlying processes? Enumerating them in a somewhat organized sequence may enable us to see the field of experience into which children may be led with profit.

The procuring of needed raw materials includes hunting, fishing, agriculture, forestry, lumbering, and mining. In some cases, the raw materials exist all ready for man to take. The fish in the sea, the wild animals in the forest, the trees on the mountain slope, and the coal and the iron and other metals in the earth have so awaited man's taking, but man's demands have been so great, or his methods of taking have been so wasteful that the supply has, in some cases, become inadequate. Hence he has resorted to conducting fish

hatcheries, oyster farms, forestry enterprises, fox farms, and cattle ranches. Some other supplies were inadequate and of a quality which he found he could improve, so he has resorted to agriculture and animal husbandry. Thus he has more and better grains, fruits, vegetables, and meats to eat.

Children are interested in questions as to how people live and what people do. Therefore, the stories of the processes of fishing, farming, coal mining, conducting a fish hatchery, and sheep raising are particularly appealing to them. The study of these in the elementary school should provide much rich opportunity for acquaintance with the detailed processes of procuring raw materials and growing raw materials.

Transforming the raw materials. The second step in the work of providing the commodities desired for man's comfort is that of transforming the raw materials into more useful products. The trees must be sawed into boards and the boards be made into houses, the clay must be cleaned and shaped into bricks, which must be baked in a kiln and then be used in building a chimney. The wool from the sheep must be washed, carded, spun, and woven into cloth, which can then be shaped into garments. Each of the raw materials must go through its essential set of processes which are fundamental to the successful outcome in a commodity. Washing the clay, mixing or pugging, shaping, drying, baking, glazing, and rebaking are essential in making ordinary dishes. Making an incised pattern and applying color in a design are accessory processes.

Understanding fundamental processes. Appreciation of commodities, and efficiency in selecting and using them, demand an understanding of the fundamental processes involved in making the essential commodities.

Genuine social appreciation is furthered if one understands the simple hand process, and the steps in the evolution from these to the complex machinery process. A modern loom, weaving a piece of linen for a tablecloth, is understood and its processes appreciated better if one first understands the Indian woman's loom with its simple heddle device, and the four-treddle colonial loom on which the blue and white coverlets were woven. A Jacquard loom gets meaning by acquaintance with its worthy ancestors of simpler construction. The story of the Industrial Revolution seems essential to genuine consideration of the problems of capital and labor. The simple weaving of a rug for the doll house in the first grade, therefore, does more than contribute to natural tendencies of children at that age. It provides a bit of detailed experience in a process — a detail that is fundamental in appreciating weaving industry of the world of all time. When the child comes in contact with woven products, and when he has become old enough to consider the changes brought about in society by the development of machinery, the bit of weaving experience may contribute toward the meanings involved.

Each of the five other industrial fields already mentioned has gone through an evolution of processes due

to the introduction of machinery, similar to the changes wrought in the textile or clothing field just suggested. Awareness of the significance of these changes in respect to quantity production, value, and influence upon the life of the workers is an outcome of social studies to be desired, if the work is rightly guided through the several years of school.

Selection and use of materials. Right sense of values necessary to proper selection and use of commodities requires that one know something of the materials that enter into the construction, their source, value, limitations, and possibilities. Wool is limited in its use because the structure of its fiber, as revealed by the microscope, is segmented like a jointed rush and each segment on its upper edge is equipped with hooks curving outward around its entire edge. These hooks tend to interlock when the fabric of wool is rubbed, and the numerous fibers become matted or felted. Therefore, a woolen garment should not be rubbed in washing. This limits the uses to which a woolen garment can be put. Boiling seems to weaken the structure of the segments and they tend to telescope, thus shrinking the fiber. This again limits use.

The cotton fiber has possibilities of being so treated chemically as to make it look like silk. Other methods can so treat it as to make the finished fabric look like wool or linen. Clay, because of its plastic nature, offers many possibilities in shaping it, but it, likewise, has some structural and design limitations. The grain of the wood and the resulting direction of strength

offer serious, structural limitations which must be regarded in furniture design. Each material has its interesting aspects which a person can appreciate if he engages in activities involving its use. Such experience is helpful in learning to value the commodities one uses.

Underlying scientific principles. In the manufacture and use of industrial products there are certain underlying scientific principles. To be aware of these, and to understand the way in which these laws act on these materials, is to be intelligent about some things that closely touch living. The reason why yeast or baking-powder bread is light, the growth principles that produce the grain in wood or the pattern in the bird's-eye maple, the principles involved in freezing ice-cream or in canning fruit, the correct method of washing woolen garments and the underlying reasons, the proper diet for a day and criteria for judging, the reasons why silk is sometimes loaded and so easily can be, the life cycle in producing silk, the essential difference in corn and wheat flour that produces the difference in texture and food value, the origin of clay beds, the nature of glazes, and the advantages of a vacuum cleaner are some of the questions leading into science which will arise if children are brought into an attitude involving the intelligent selection and use of industrial products. Much study of this kind will lay a foundation of experience in material that later will prove valuable as data for use in organizing one's understanding of scientific laws. Such work should

make for an inquiring attitude, an investigating tendency that is most wholesome for promoting open-mindness.

The factors involved in studying commodities. In studying the manufacture and use of industrial commodities there are certain considerations that are involved. The hygienic conditions in the production or manufacture and in the use of the commodity should be known. The conditions in the factory where made, the effect of the size of type upon the eyes of the reader, the consequences of having a diet which is one third or more cereal, the wisdom of wearing woolen garments when hiking, and the importance of sunlight in the bedroom are some of the topics one might suggest.

The economic factors, especially in selecting and using commodities, are significant if one would live efficiently. How much should one's essential clothing cost? What are the best cuts of meat from economic and dietary points of view? What should be done with waste paper? What is the most economical material for school dresses? Is milk an expensive food? These are questions that may be considered with interest and profit.

The social factors have been frequently suggested throughout the chapter. They scarcely need emphasis here, yet they should be listed among the important considerations in selecting and using. How much wool is produced annually? If it were distributed equally among the people needing woolen garments because of

the climates in which they live, how much should each receive? What are the social implications of being a night worker? What social life do factory workers have? How many children are working in factories to-day? How many people work that you may have your orange for breakfast? What people of the world contributed to your food to-day? These are possible questions of interest and profit.

The æsthetic factors are of continuous importance in the selection and use of commodities. Wherever one goes he is an expression of composition in line, tone, and color. His clothes are important to all whom he meets. The vase in which the flowers are put should be chosen with attention to the resulting composition, and children should have opportunity to make such choices. Usually, however, the teacher fails to see this learning situation, and chooses the vase and arranges the flowers herself. The appropriateness of the thing chosen to the use to which it is put is not always recognized as an æsthetic quality. Young girls need to learn what constitutes a good-looking costume for hiking or for school. Silk hose are beautiful for some occasions, but their beauty is relative. The element of relativity in beauty is an important one. The alert teacher finds it involved in many of the situations of child life.

The process of distribution. The third phase of providing commodities is that of distributing them to the consumer. In the early stages of civilization barter was the method. He who had more wool than

he needed exchanged some for grain which he lacked. With the development of quantity production and specialization came the need of buying and selling, and a medium of exchange was devised. The consumer came to be remote from the producer in the complex industrial and commercial system that arose. This necessitated the development of elaborate systems of transportation — freighters, merchant ships, barges, freight trains, mammoth trucks, express systems and parcels post. Even now airplane shipment of commodities is being attempted.

The stories of the merchant guilds, of the Yankee Clipper, of the pony express, of the Star Routes, of the first railroads, of the caravans of the desert, of Marco Polo's travels, of the trade routes and of merchant princes are of value in developing a sense of the progress that has been made in transporting commodities. Along with the development of exchange of commodities and the use of the labor of employees working for wages, came the needs for money and the consequent development of coinage, banking, and finance. Such study gives promise of valuable returns in understanding human progress and interdependence.

Summary. The social studies are concerned with the study of human experiences: (1) with the physical world as it conditions man's living; (2) with human relationships as they modify living; and (3) with the work of the world: (*a*) in procuring raw materials as in mining, fishing, hunting, lumbering, and agriculture; (*b*) in manufacturing these materials into more usable

products such as food, clothing, shelter, utensils, records, and tools and machines; and (*c*) in distributing these products to the ones who use them, the problems of transportation and commerce. Detailed experiences in each of these aspects of living will, in time, bring the child into contact with the breadth of a content which can represent the aspects of living which one needs if he would understand life in its fullness and richness.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. List the peoples of the world children should study in detail somewhere in the six grades of the elementary school. How many should there be in all? If you cannot include all the peoples who have contributed toward social life by their mode of living, by what criteria will you select?
2. What are the motives that impel men to work?
3. Go to a crowded city street and watch the hurrying people. Try to list the motives that are impelling them to hurry.
4. Find the rural population to-day. Find it for 1910. What factors have contributed to the differences you find in these figures?
5. List the things in your environment which would be profitable for elementary-school children to study. What values would you expect from the study of each? Classify them under the three headings: experiences with physical world, experiences with people, and experiences with the work of the world.
6. Start keeping a bibliography of interesting information in the field of social studies. List twenty-five topics which you think should be included in such a bibliography. Choose five magazines and go through one

year's file of each, making reference cards for each article you find valuable for your bibliography.

7. List twenty facts the meaning of which you believe would function much in the reading of elementary school children.
8. List twenty facts taught in elementary-school geographies and histories which you believe do not function in children's lives.
9. List fifteen facts that were useful twenty years ago which are now changed or no longer relatively useful. How long does a fact remain useful?
10. Study the data in your geography text relative to the exports and imports of the prominent countries of the world. How many of these data are true to-day? When were they true? How long will the true ones continue to be true?
11. List the things that are shipped into your community for a week. Find their source. List the things that are shipped out of your town for a week. Find their destination. How large is your world?
12. For five successive evenings listen to the radio news announcements for one period each evening. Note the geographical location of every place mentioned. How large is your radio world?
13. Follow a daily paper for a week, listing all the items found which you believe are of significance in child living and learning.
14. List all the products of the industrial world you use in one day. Find the place of manufacture of as many as possible. How large is your industrial world of one day?
15. List the peoples and places mentioned in one issue of a metropolitan daily. List those in one issue of your local paper. Compare the two lists to get an index of the importance of your world.

CHAPTER VII

GUIDING THE WORK OF THE SOCIAL STUDIES

1. *The guidance and organization of social experiences* — Three possible aspects of experience — The integration of these aspects of experience — The study of wheat as involving these three aspects of experience — The problem of organization into subjects — Teaching by units of interest — The deficiencies in recent courses of study.
2. *Fundamental principles as to organization of content* — Some guiding principles — Four organizing principles for developing the time sense — The use of a time chart — The need for developing a space sense — The use of maps and globes — The aspects involved in developing a sense of processes — The processes of the physical world — The processes of the social world — The processes of the world of work — The importance of developing a sense of values.
3. *Some fundamental principles as to method and sequence* — The development of reference points — The inductive principle — The factor of challenge — The factor of child interests and abilities — The factor of complexity and simplicity — The factor of learning through doing — Contacts with realities.
4. *Suggested guide lines in organizing the work in the elementary grades* — Central ideas for each grade.

Summary — Suggestions for thought and discussion.

1. *The guidance and organization of social experiences*

Three possible aspects of experience. It is convenient to list the social experiences under three general heads, as was done in the last chapter. It would probably be more accurate to speak of these as three possible aspects of experience, rather than three kinds, namely:

1. The aspect of experience coming from contact with the physical world.

2. The aspect of experience coming from contact with people.

3. The aspect of experience coming from contact with the work of the world.

If we consider experience, in its totality, everything an individual does is done under some physical conditions. The day is warm or cold; there is sunshine, or it is gray or cloudy; some phases of plant life, animal life and surface features or scenery are probably involved in the experience in some degree. Some aspects of the physical world are involved in everything one does.

Similarly, it is difficult to think of one's having much contact with the physical world or with the work of the world without involving other people. One's work would lose much of its significance if he attempted to conduct it on a lonely island, entirely removed from people. People are vitally concerned in the work one does.

Still further, the work one does is dependent upon the physical world for its raw materials, and for the limitations and possibilities the physical conditions impose and contribute in the process of doing that work. All three aspects seem to be involved in most of the things one does, but with varying degrees of emphasis. Thus, we can truly say that all the social studies are integrated into one continuous experience.

The integration of these aspects of experience. The teacher may become so impressed with this integration that she ceases to be concerned with the respective

aspects indicated. This may lead to poor organization, lack of balance, and acceptance of parts of experience which may be only fragmentary. Whether the social studies are regarded as one total subject, whether they are taught as several subjects, or whether they are embedded in an integrating experience with or without attention to subjects, two things are essential:

1. All the significant factors of the situation involved must be considered if one would get a well-rounded understanding.

2. Each phase of the situation must be related to similar phases in other experiences to the end that organization of knowledge, ideas and experience may gradually take place.

If we are to identify the three aspects listed with the school subjects as they have come to be regarded, we should have:

1. Experiences of people with the physical world — geography, nature study, elementary science, hygiene and elementary agriculture.
2. Experiences of people in living with people — history, civics, and elementary sociology.
3. Experiences of people with work in:
   - *a.* Procuring or producing raw materials — hunting, fishing, mining, forestry, lumbering, agriculture; usually included, at least in part, in geography.
   - *b.* Transforming raw materials into more useful commodities — handicraft work and manufacturing; a little of this inadequately included in industrial arts or manual training, and in the household arts.
   - *c.* Distributing commodities — barter, buying, selling, and shipping; usually included, in part, in geography.

The study of wheat as involving these three aspects of experience. It will be seen that the consideration of the raising of wheat and making it into bread is to the child a unified total experience. The study of it, if well rounded out, should include climatic conditions controlling wheat growing, kind of soil and food needed for growing it; the dangers from pests and diseases, and how these can be avoided; the selection of the seed relative to the climatic conditions; the use to be made of the grain; the structure of a wheat seed; the germinating of the seed; labor conditions; the processes of planting, gathering, threshing, and shipping to the flour mill; the processes involved in the making of the wheat into flour, the evolution of these processes, and the different kinds of flour possible through the varied processes; the shipping of the flour to market; selling to the consumer; the price of flour, and its control; making the flour into bread, with its varying possibilities as processes are modified, including methods of mixing, methods of lightening, and methods of shortening; methods of baking and distributing; differences between wheat and other flours; ways of caring for the bread, serving it, and the part bread should play in one's diet; and finally, the significance of wheat to various peoples of the world.

The child is interested in these elements, though not necessarily in all at one time. It is doubtful if he says, "Now this study of the yeast plant is elementary science, this process of making flour is industry, this choice of winter or spring wheat variety is agriculture,

this fact that Minnesota is a great wheat-growing State is geography." Such thinking in subject categories probably comes, if at all, later. "This is the story of wheat," "More about wheat," "From wheat to bread," are probably his mode of identifying new elements in his experience with wheat.

It is well for the teacher to help the child to build up a well-rounded continuity by seeing that each new element is related to the previous elements about wheat, but this is not all. These elements must be related to similar elements in other experiences. The structure of the wheat grain should be related to the structure of corn and barley in order to understand the differences in flours; the use of wheat in diet should be related to other studies of diet; the present methods of grinding wheat into flour should be related to more primitive methods, and to the peoples who used them; the significance of wheat in the lives of the people who have grown and used it should be related to other living conditions of these people.

If such cross-relationships are constantly being developed, gradually there will be built up organized bodies of ideas coming out of the child's experience, which may, in time, become *subjects* of interest.

The problem of organization into subjects. Shall the social studies be taught as separate subjects? Shall they be taught as one subject? Shall they be taught in rich living without regard to subjects? The danger in separate subjects is in the lack of relationships, the failure to take account of the total situation.

It is easy to get teachers of history to agree that the story of the westward movement through the Cumberland Gap and Wilderness Road needs some consideration of maps for full appreciation, but questions may be raised as to how fully the physiography of the country should be considered. The study of the conditions producing these northeast-southwest parallel valleys, with the frequent wind gaps in the ridges, lends much understanding to the story and shows why the French Broad was such a significant valley and why the Cumberland Gap was so important.

This study of the drama of western North Carolina and Virginia, and eastern Kentucky and Tennessee, is very helpful to an understanding of this part of the history of the Westward Movement, and also to the study of earth processes which have made the living conditions to-day presented by reason of the physical features in our country. Shall all this be taught as geography, or shall it be taught as history? The danger is that, if it is left to either, it will be superficially taught so far as the other is concerned. The history teacher will often be content with the mere tracing of the route on the map; the geography teacher will, in passing, merely allude to the fact that these valleys and wind gaps were very useful to the pioneers when migrating westward.

Teaching by units of interest. An alternative method is to teach the social studies as a unified whole, basing the work upon units of interest or activities. The difficulty here lies in the fact that the work will

consist of interesting units, each a well-rounded piece of experience, but the drama of the Southern Appalachians will remain an interesting unit, without being connected with other experiences containing similar factors. This connection should be made, and made in such a way that the physiographic aspects will become part of a well-organized understanding of some physiographic processes, and in such a way that the history of these particular people will become knit with the general Westward Movement which played such a vital part in the development of our Nation.

The subject matter specialists fear that working by activities or units of interest will make for a fragmentary or scrappy study. On the other hand teachers who are interested in children's tendencies and activities often are teachers who are not interested in formally organized knowledge; they often are not scholarly. Teachers who are interested in bodies of formally organized human experience often do not know children's interests and tendencies, and cannot sense what is needed next to promote their growth. The former clearly need outlines of subject matter, showing interrelations of organized bodies of human experience, to serve as identification and check lists in evaluating the trend of the children's activities. The latter need a sort of teasing out of the subject matter into its rootlets, as these are bedded in child experience, so that they can see what the little details mean to children as children experience them.

The deficiencies in recent courses of study. An

examination of recent curricula on the social studies in the elementary school impresses one with the fact that the proponents of integrated work may well consider whether they are proposing the use of isolated fragments only. Will these pieces of history and geography ultimately take on organization? Will the time sense be developed? Will space relations be built up? Will causal relationships be understood?

Recent courses in geography, history, and industrial life are subject to questioning as to whether the work is properly related to child experience, and is likely to be knit into the fabric of life. Whatever the recent curricula may be in their adopted plan of organization, there is room for questioning. Do we know yet what are the better lines of organization to build first? Do we know child nature and its development well enough? Do we know when subject interests materialize? There is need for much more study of child learning. When should the time-sense be developed? When should space and causal relations be built up?

2. *Fundamental principles as to organization of content*

Some guiding principles. Our knowledge of what is best to teach and how to organize the work for children is inadequate. Yet we must have some program of procedure. The children are growing and learning, and we want the work to be as fine as we know how to make it. There are, fortunately, some factors which

seem reasonably well established, and which now can be applied.

We have to choose in the elementary school between teaching this large body of social experience: (*a*) as separate subjects, (*b*) as one subject called social studies, or (*c*) as a vital part of a rich living experience, with or without attention to subject organization. Whichever plan is chosen we must see to it: (*a*) that the learning is in terms of child experiencing, (*b*) that each experience is rounded out in the fullness that is valuable to the child of a given age, and (*c*) that the child relates the aspects of the given experience to the corresponding aspects of experiences he has previously had.

With our present limited knowledge, the question of organizing sequence is extremely difficult. There are a few principles, however, which will guide us here:

1. Whatever the activity it should be challenging to the child, but within the possibility of successful outcome.

2. What the child does at a given time should lead him to push on to something farther reaching, more challenging, as his next undertaking.

3. What he does should be of significance to his present living.

4. One does not need to master all of a subject at the time he has experience with it.

It seems that we can follow these principles in developing the child's experience with the physical world and with the work of the world, and come to

several possible selections and organizations of activities. In the work of the world, each year's study should add something to the child's understanding of the production of raw materials, and of manufacturing, shipping, buying, and using commodities in the six industrial fields already outlined. The specific units may vary greatly. Similarly, in learning to know how the physical world affects the life of people, if one follows the principles just listed, he will be safe even though there is great variation in the specific activities engaged in.

Organizing principles for developing the time sense. A distinct problem is involved in deciding upon the best organizing sequence for the child's coming into an understanding of ways of living with people. The history, or time element, is involved. How shall this time sense be developed?

There are four points of view held by leading thinkers. One is sometimes called the chronological point of view. In following it, the teacher must decide the point in historic sequence where the child should begin, and then should guide the child forward, incident by incident, studying each event in terms of its significance at its time. This point of view does not concern itself with using the past to interpret present-day situations. Such use of history in interpretation is left to the individual. He may use the data. If he does, such use would be a by-product of learning.

The second point of view asserts that the purpose of

history is to explain the present. Only such facts of the past as do this should be considered. The point of departure is in the things in the child's life to-day which concern him, things which he wants to understand, which challenge him. With each of these questions the teacher leads him to go to the past and get the data needed. This is called the psychological point of view. The essential element in this theory is that such past as is studied be significant now. No attention is given to developing a causal relationship between events. The development of a sense of time and progress would be left to chance.

The third point of view recognizes the value of the chief emphasis of the other two. The child must build a sense of human development. He must be led to acquire a time sense. On the other hand, it is essential that what he learns be of significance in his life. Can both these points of view be taken care of?

Two further factors are recognized by this third group of educators. One is the fact that at any given time there are several things challenging the child. To get the historic explanation of any one of them would be satisfying. In fact, he chooses one whenever he does study history. The other factor is that of a progress, or "what-next," interest in children. We sometimes call it the narrative or continuity interest. If a child becomes interested in the problems of a given historic incident, he is eager to follow the people further and find what happened next. With this acquired interest in seeing what happened next, the

next significant event may come to have two approaches of importance to the child: (*a*) What happened next? (*b*) What effect did it have on us? The teacher's province is to see to it that both interests are guided and satisfied.

A fourth possible organization relative to time is being considered. Some teachers who believe in developing in children a sense of human progress follow a program of work which consists of a series of units, each of which is a study of a phase of human achievement. The work of the farmer, the production and use of wool, the story of boats, the evolution of the book, and the story of wheat are typical units used. Each grade studies a number of such units. Each study attempts to include the ways various peoples have dealt with the problems involved in providing for the phase of living it represents. Its compass includes accounts of most primitive methods, followed by successive ways of peoples, ending with modern, complex achievements. This organization disregards the study of peoples as such, and organizes around functioning processes instead. Its advocates believe that it is a better way of building into experience the understandings and data out of which the meaning of human progress will come, and that a time sense will thus gradually be built. Proper consideration of former units of study in the development of each new unit can make possible a sense of contemporary conditions and relationships which is extremely valuable in developing the time sense.

The use of a time chart. Professor Dewey has pointed out that children are not interested in chronology as such. The time sense matures gradually and is not apparent until later. It is the province of the teacher to guide this maturation. One way of doing this, which has been found helpful by some teachers, is the use of the time chart. A long strip of manila paper is placed on the wall. It is divided into convenient periods of time, and the dates are placed above each period. When an event is studied in any of the work of the school it is entered on the chart under its proper date. This practice of recording events studied leads to the habit of thinking as to whether each new event came before or after others previously studied. Thus it is believed a sense of beforeness-afterness, or relative time, of causal relationships, can be built, providing the teacher is careful to stimulate such thinking each time reference is made to the time chart.

It is believed that such a time chart is valuable in any one of the four proposals for organization of the work for developing the time sense.

The need for developing a space sense. Children need orientation in the world of space. Distance, direction, area, and volume are concepts which can be developed only by much experience with these factors in life. Instead of leaving it to chance development the experiences should be so organized as to bring them into a perspective which is representative of the space conditions in which we are living. The

influence of recent inventions on modes of travel has tended to destroy our measures of distance. "A Sabbath day's journey" seems to have lost its old significance, as has the term "stages of a journey." The child of to-day is tending to measure distance in terms of a day's trip in an automobile. The airplane, the news reel at the movie, the photogravure section of the Sunday paper and the headlines of the morning paper have tended to annihilate distance. The whole world is the child's to experience.

The use of maps and globes. The continuous use of maps and globes seems to offer one way of developing this space sense. Every classroom should be equipped with a globe and some maps. A large map drawn on the floor is highly desirable. It should be so placed that north is north. Crayon can be freely used on it and washed off before the map is needed for a new phase of the work. The regular practice of referring to these maps and globes whenever any topic having space relations is discussed will promote the development of this space sense.

As experiences with maps multiply, questions will arise. The consideration of these questions will provide excellent means of keeping experience in this field organized. Latitude, longitude, distance and earth relationships will take on significance as this organization develops.

The aspects involved in developing a sense of processes. One of the significant outcomes to be sought in the social studies is the development of an under-

standing of the processes which are continuously in operation in the life about us. These processes seem to classify easily into three sorts: the processes of the physical world, the processes of the social world, and those involved in the work of the world. A measure of understanding of these is essential to fullness of living.

The processes of the physical world. In the physical world we find several processes in action. Wind, frost, and water are busy eroding the surface of the earth so that it is in the process of being brought to an ultimate level. To understand what is happening that will inevitably bring a time when "the mountains shall be brought low" gives one ability to appreciate some interesting phases of life to-day. The processes of the biological world are best guided and controlled when one understands them. Adequate control of one's living requires mastery of the meaning of some of these processes. The changes going on about us include many forms of physical and chemical action. Growing boys and girls are entitled to wholesome, intelligent contact with these phenomena. The school should provide such contact and it should be so organized as to make possible the gradual understanding of the underlying principles.

The new experience always is interpreted in terms of previous experiences. Laws are sensed, mastered and become one's own only as they emerge out of detailed experiences in which they are bedded. Hence, the work should first be detailed experience, and later fol-

lowed by recognition of the laws as the common factors in the various experiences are recognized by the individual. The work of the lower grades, then, should be detailed contacts with weather, climate, erosion, soil, surface, distance, direction, vegetable and animal life — all the physical aspects of life.

The time for the recognition of the underlying laws varies greatly with the children, the environment, and the type of activities they engage in. It seems a doubtful procedure to state a specific grade when certain laws are to be mastered. Experience with these aspects of the physical world should be continuous throughout the grades. Each new experience should be profitable because of its possibilities in leading the child's understanding a little farther along. Uniform, rigid gradation seems impractical.

The processes of the social world. The history of man is a study of his effort to find a process of living with people where the rights of the individual and of the group are regarded. For understanding of these social processes there must be experiences with many different peoples. These will have to be largely vicarious. They will include questions as to protection, property rights, relationships with neighbors, forms of government needed in securing rights and provision for meeting the necessities of living.

In these studies, there is, as already shown, the factor of change, development, and progress in the ways people have devised of living together. The experiences should be such as to give the child a con-

sciousness of this change. Children find the stories of simpler forms of social life easier to understand than the forms about them. Therefore, in understanding home life and community life of to-day it is well to use, at the same time, stories of simpler forms of living which illustrate the same problems.

Fire Keeper at the door of the cave, keeping up the fires and thus protecting the others while they slept, illustrates some fundamentals in police and fire protection; Abraham making division of the land to supply water and food for the flocks, illustrates underlying principles of some of our complex problems in land ownership and of food and water supplies; the long house of the Iroquois illustrates some problems of community coöperation; the colonist of our own country illustrates a simpler, more understandable way of providing clothing and fuel. Therefore, it seems well so to guide activities that there will be a series of experiences which illustrate present-day problems, with a gradual gradation from the simpler to the more complex forms of meeting social problems. This will mean the introduction of some of the stories of primitive life, and a little of Indian life and Colonial life as early as the second grade, as soon, in fact, as the experiences reach out into the complex community. More of the Colonial and Indian life illustrations are better suited to the third grade, because the children are then better able to experience the processes which these peoples devised in meeting their problems.

Professor Bonser has suggested that in thus using

the primitive, the Indian, and the pioneer, we are starting an interest in both world development and the development of our own Nation. He, therefore, proposes that these two threads of interest be carried on throughout the six grades, devoting part of the time of each year to each. The thread of world development includes the contributions of the Hebrews, Egyptians, Greeks, and Romans, the forms of living of the Middle Ages and the changes brought about with the spread of knowledge coming with the invention of printing, culminating with the discovery, exploration, settlement, and development of the new world. The thread of American development includes the discovery and exploration of America, and the settlement, the formation, and the growth of the Nation.

The processes of the world of work. These include the processes of lumbering, mining, fishing, forestry, hunting, and agriculture which are essential to gathering and producing needed materials; the processes of making these materials into more usable forms to meet our needs; and the processes of barter, trade, and commerce which have to do with the distribution of these products to those who will consume them. In every one of these the race has made some advancement from very crude, primitive methods to some more effective methods where the use of mechanical devices has made it possible to do the work more easily and to secure larger returns for the efforts. Insight into the progress man has made in these processes means respect for man's inventive ability. It means

better understanding of the problems involved in providing the means of comfortable living.

In organizing the experiences which the children get in their contact with the work of the world the only guiding principle seems to be to keep the process side developing from the simpler to the more complex. The simple, over-under process in weaving should precede the devices for producing speed in sending the shuttle through a shed instead of laboriously going over and under. Generally speaking, hand processes should be experienced first. Each year should include some growth in the fundamental aspects of the work of the world. There should be in each grade something by way of acquaintance with agriculture, with some of the processes of securing raw materials from the earth and with the processes of providing foods, clothing, shelter, records, utensils, and tools and machines. There is much room for variation in the specific units which a given group of children study, but there should be gradation in difficulty, challenge, and significance to the children in their own lives in what they do study.

The importance of developing a sense of values. The work of the social studies should culminate in the development of a sense of values. As children understand the law of supply and demand, as they become acquainted with the processes that are continuously in operation, as they get some notion of the work that is done to supply needs, they acquire a sense of values that is essential in understanding the process of living.

Human values can only be sensed as we glimpse the problems involved in the modes of living as practiced by the various peoples of the world. Sympathetic appreciation of peoples comes with understanding. Judgment as to the worth of materials comes with knowledge of their availability and of the work needed to get them. Appreciation of the worker comes with understanding of the processes he is carrying on.

3. *Some fundamental principles as to method and sequence*

The development of reference points. The amount of factual material which may come into the child's experience is becoming so great as to raise a serious problem as to the amount of memory work needed. Books of reference and compendiums of information are commonly available so that encyclopædic knowledge does not seem necessary. The psychology of the learning process seems to stress more and more learning in relationship and thinking clearly. Associative learning is more important than memorization of facts.

These considerations suggest that the school should seek to establish in each child mastery of desirable reference points. Instead of trying to memorize numerous facts of height it seems better to fix the exact height of a few things in his experience and use these in interpreting new height experience. Then the new factor becomes, not so many feet high, but so many Washington Monuments, or so many Woolworth Towers, or so many Mount Mitchells. Facts of

distance likewise should have their known reference points. This same principle seems to apply to questions as to width of streams, areas, population, and to units of volume, weight, and time.

Perhaps a proper guidance of the growth of the child's sense of values will develop in him points of references which will, in a measure, become indices of civilization. Students of the pottery industry can make a reasonably safe estimate of a people's civilization by examination of the pottery they have produced. Are methods and habits of storing and preserving food, likewise, indicative of the degree of advancement?

The inductive principle. This discussion of organization leads us to another important principle in guiding sequence of work. The work in the early grades should deal with many interesting details of how people live and what people do. These details should be such as appeal to child life, but they must have embedded in them the factors which are ever present in problems of group living. The child gets the account of the way the Eskimo builds his winter home by using the materials at hand in such a way as to protect him from the cold. Then the child comes to know the Mexican adobe house and its structural reasons. The Indian tepee at another time is seen as a marvel of convenience in living a roving life, with Indian ponies as the beasts of burden. At another time, the intricacies of the castle are studied, with its moat, drawbridge, portcullis, and keep, and with its palisaded wall, its court

— large enough to protect the retainers in time of attack, and its deep well as a source of pure water during a long siege.

Gradually, in the diversity of houses, he comes to recognize common factors. Each furnishes the protection needed in its particular setting. Each is made of the most suitable material its environment affords. He thus makes the induction by taking these steps: (*a*) He has many experiences with situations where the law is working: (*b*) the time comes when his familiarity with details enables him to discover common elements in the various experiences; (*c*) class discussion and the guidance of the teacher help him to pull out these common factors and examine them; (*d*) he sees the law for himself, and this may be augmented by the recognition in the group activity that he has seen it. These constitute the essential steps in the process of induction. It is the way one comes into the understanding of laws.

In all the work of the social studies, we have been pointing out that the objective is to develop understandings, see laws, and get firm hold of the principles that control social living. The method that is essential seems to focus upon this law of induction. The work of the grades should consist largely of many rich experiences, giving an abundance and variety of detailed situations in living. When the child begins to see similarities and common factors in these situations, the teacher should encourage him to contemplate them.

The time when a child sees the law, and so makes it his own, is a matter of individuality. We cannot force this third step. We can help him to get satisfaction in his possession of the truth. The first step — getting the many, varied particular experiences — we can insure. We must watch for step two — seeing the common factors — and encourage it by helping to make the factors stand out. The individual must take his own time for the second and third steps. Some may never take these steps or the fourth step; even then, their lives are the richer for the first step.

The factor of challenge. The organization and gradation of the work should keep this factor of challenge in mind. To permit the work to remain on a childish level when the child can do more difficult things is robbing the child of his rights. Fairy stories have a value, but to tarry too long in fairyland when the workaday world is calling may cause the child to miss some valuable phases of experience and growth. The study of processes gives us excellent opportunity for guarding this matter of increasing difficulty.

The factor of child interests and abilities. Our present knowledge of the elements in child growth and their sequential development is all too inadequate. If we knew the significant elements and if we knew the norms of proper sequence the guidance of a child's education would be far more simple. To experience a thing too prematurely may make for wasted effort and it may lead to aversion. To fail to recognize nascent tendencies may mean loss of opportunity in guiding

the work. As fast as we can discover the laws of child growth we should use them in organizing the work. Doll interests, tendencies to make collections, interests in the heroic and in adventure, and tendencies to seek group organization in some form of club and gang are now receiving some recognition in some of our better courses. Adequate knowledge as to child growth, interests, and abilities would probably go far in solving the question as to what shall be the central organizing theme.

The factor of complexity and simplicity. This factor is essential in guiding children into some understanding of processes. The child's world of civilized life is extremely complex. To understand it he needs this experience supplemented by contact with much simpler illustrations of the same processes he is encountering.

Children do not deal with the complex civilizations so readily as do adults. Until they have learned to recognize the factors involved in problems of group living, they should be dealing, in part, with the simpler modes of living where these factors are more easily seen. Then, by comparison our more complex modes are better understood.

The work in the lower grades should thus include the simpler forms of group living. The leadership of an Indian village, the protection of a tribe from its enemies and the allotment of land in Abraham's day are easier to understand than are questions of political leadership in the time of Cromwell, or land ownership

under the Feudal system, or the maintenance of a standing army to-day. Many illustrations of simple ways of dealing with the factor of ownership, or of protection, or of water rights will gradually lead the child to an awareness of the factor, and then is he able to study ways in which complex civilizations deal with it.

The factor of learning through doing. In all learning it is a matter of individual experiencing. Learning comes by doing. Part of this doing may be by way of first-hand contact with the situation itself. Much experience must be supplemental to this first-hand experience, in which the child through reading, or pictures, or some other vicarious way is enabled to widen the boundaries of his own experience so that he has a more comprehensive view of the particular phase of living.

In planning the education of children this factor must be kept in mind. Learning may be furthered by doing the thing one's self, by watching the process in action, by listening to some one describe the process, by studying pictures and diagrams which show the process, by reading about the process, or making or examining a collection of illustrative materials involved in the process. The method to be used in enriching the child's learning is the one available which will produce the desired results with economy of time, materials, and effort.

Contacts with realities. In all the work of the social studies we are dealing with factual material. It is extremely important that we teach children to respect valid statements and demand reliable data. Much

that has been written as history for children is not in harmony with the facts. Some writers of children's history would almost seem to think that children do not like the truth. Those who have tried giving children some source material in history believe it is genuinely satisfying. The difficulty lies in the availability of such material. We need workers in history competent to gather reliable data, and also competent to gather material suitable for children's growth.

In the work in geography, science, and industry, too often teachers allow children to be content with materials that are out of date. A text in geography, bearing the date of 1910 or 1914, is not of great worth in getting at facts significant to-day. Children must be taught the value of recent, reliable data.

In all this work much use should be made of maps, globes, charts, and graphs. Space, distance, direction, and magnitude are not easy to teach, and these values are as important as that of the time sense. Children must learn to value points of reference, bases of comparison, and units of measurement.

This work in the social studies is an attempt to bring the child into contact with the realities of life to the end that he may live richly and fully. Meanings are of tremendous significance in fullness of living.

4. *Suggested guide lines in organizing the work in the elementary grades*

Central ideas for each grade. As has been shown, we do not know to a certainty what constitutes the

best sequence in developing the three aspects of the social studies. There must be, however, some selection of material and activities for the work that is to be done. We can always study the selections of those elementary school teachers who have succeeded in promoting desirable growth in children. From acquaintance with the practices of a number of these the following suggested guide lines have been formulated, and are offered here for use until further knowledge of the laws of child growth is secured.

The general trend of the activities in the six grades may be so selected as to center around the following lines of interest:

Grade I. The home, its members, its activities, its needs by way of house, furnishings, environment, clothing, food, and recreation, and the farm and grocery store as sources of supply.

Grade II. The home in relation to the community. The members of the community, its physical conditions, and its coöperative efforts to provide police and fire protection, clean streets, libraries, schools, clean water, and markets. This should be accompanied by stories of peoples who have met many of these same problems in a much simpler way, such as stories of primitive peoples, some phases of Indian life, and possibly some of the stories of the first colonists in America.

Grade III. Further study of the community in its relation to its environment, physical features, neighbors, lines of communication with other communities,

sources of supplies, activities of the people, and processes involved in carrying on their living. Further studies of peoples by way of comparison should be made. These probably should include the modes of living of the colonists, the Indians, the Eskimos, and the Dutch.

Grade IV. The community in its relation to the world, as a whole, and the products of other lands used, together with the lives of the people producing them, and their physical environment, their songs, stories, industries, customs, and costumes. Comparative studies accompanying this should draw upon the past to explain the environing conditions of various parts of the world studied. This will include the contributions of the Chinese, the Egyptians, the Greeks, the Romans, and further studies in Colonial life.

Grade V. The work preceding this grade should have given experiences enough to cause some emergence of interests in the three aspects of the social studies. Further studies of these interests should lead to continuance of the study of man's progress as seen in the stories about the Middle Ages, the crusades, feudalism, chivalry, knighthood, handicraft occupations, travel and trade. Perhaps this story of man's mode of living should include some acquaintance with the civilizations on the American continents, in connection with attempts to settle it. The story of the settlements should go farther, carrying the story into pioneer life.

The interest awakened in what people do would call for more intensive studies of occupations in selected

areas as these occupations are conditioned by physical conditions. The industries and climatic conditions of North America and the United States seem of first importance for intensive study. This will serve to further the developing insight into both social and industrial processes involved in living.

Grade VI. Continuance of the emerging subject interests would call for the story of the changes in Europe leading to the period of discovery and colonization, and to the changes brought about by the westward movement in the development of our own nation. The geographical aspects of these emerging interests call for further study of the physical conditions of life in the United States and for the study of Europe's geographical setting at the time just preceding the settlement of this country. Present European conditions will be in continuous use in the discussions. The interest in industrial processes as developing through the grades should here include the story of the changes brought about in Europe by the invention of machinery and its substitution in the making of commodities. These inventions should be traced to their entrance into this country together with the conditions they produced.

Summary. The organization of the social studies involves the necessity of making provision for the development of understanding of the three aspects of experience, that having to do with relationships with the physical world, with relationships with people, and with relationships with the work of the world. Prin-

ciples underlying the proper organization of content must guide the development of a time sense, a space sense, a sense of the processes operative in life, and a sense of values. The principles underlying method and sequence must take account of the teaching of reference points, the principle of induction, the factor of challenge, the factor of child interests and abilities, and the factor of learning through doing. Our present limited knowledge of child growth and needs makes only tentative any proposals as to themes and methods in the organization.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. Follow the detailed work of a class of children in the intermediate grades. Note the instances where reference to a time chart could be made. What factors should be in the children's thinking when they are locating an event on the time chart?
2. What practices can you suggest as helpful in developing the space-distance-direction-area sense? How valuable would you consider the practice of pointing in the direction of the place under consideration? How valuable would you find the use of a floor outline map of the world, drawn in India ink? What advantage would there be in being able to write upon it with chalk?
3. How much wool was produced in the world last year? Find the total population of the countries of the world the climate of which is such as to make woolen garments desirable. How many pounds of wool per person did last year's production provide?
4. Suggest ways of teaching children the value of a woolen garment, a brick, a loaf of bread, an automobile tire, and a newspaper.

5. Go to files of magazines and to geographies to find why there was a dispute at the Peace Conference at the close of the World War over the disposition of the Saar Valley. What values were involved? Find the values involved in the Mosul dispute.
6. What sense of value was lacking to the Indians who sold Manhattan Island?
7. List the points of reference which you think would be valuable to teach the children in your community. What would make the best reference for height? For area? For distance? For population? For volume?
8. Choose six widely distributed cities in the United States and suggest reference points for the children of each.
9. Select six well-known peoples of the world, present or past, whom you regard as important enough that children should study them in detail. List the significant details that you think should be included for each. Check your listing with Dr. Dewey's suggestion in *School and Society*, chapter VIII, that children should study how people live and what people do.
10. After a heavy rain take a class of children to a neighboring stream to see the muddy water. Take back to the schoolroom a gallon of this water. Place it in a large glass vessel and allow it to remain quiet until the water becomes clear. How much deposit do you find at the bottom? Where did the stream get this material? What is the ultimate destiny of the hills? Enumerate the forces that are busy leveling the hills.
11. List all the processes involved in producing a loaf of bread, a china plate, a piece of paper, a pair of shoes, a yard of woolen cloth.
12. In what grades do you suggest that children should study the processes? When can children most profit in studying weaving, dyeing, spinning, making wood pulp, glazing, washing clay, and mixing concrete? What principles guide you in deciding this gradation?

13. Where do we get clay? How was it put there in such thick layers? What caused the layers of clay or sand one sometimes finds in a hillside? Of what value do you think the study of these things will be to children? In what grade should such work come?
14. List the major lines of progress toward civilization which man has made through his inventive genius. Which of these may be used as an index to judge the relative degree of civilization of a people?
15. Recall the time when you first understood carrying in addition; the law of supply and demand; the meaning of coöperation, interdependence, justice; the principles controlling the location and growth of a manufacturing town. How many contacts had you had with each of these previous to your understanding the underlying principle? When would you expect children to understand each principle?
16. List the kinds of houses of various peoples you would teach to children before you would expect them to sense the law that type of house built by a people is dependent upon (1) the climatic conditions, (2) the available materials, and (3) custom of the people.
17. Bring together the detailed stories about the early history of Holyoke, Lynn, Fall River, and Lowell, Massachusetts. Can you find the common factors which are in each of these stories? What law was working to determine the location and growth of these towns?
18. Study the history, geography and occupations of the peoples of St. Louis, Kansas City, Omaha, Chicago, and Minneapolis to find common factors which reveal the laws controlling the growth of these cities.
19. List false generalizations which you have met which you believe are based upon insufficient data.

CHAPTER VIII

GUIDING THE ACQUIREMENT OF LANGUAGE ABILITIES

Importance of the language abilities in living well — Situations in school which necessitate the use of language — Learning in relationship to use.

1. *Suggestions relative to the teaching of spelling* — The use of prepared lists — Testing the week's list — A week's teaching procedure — Proper teaching procedure — Other suggestions as to teaching spelling.
2. *Suggestions relative to the teaching of oral language* — The uses of oral language in school — The expression of ideas — Teaching correct form — Essentials in teaching the use of correct form — Definite instruction — Sequence and gradation.
3. *Suggestions relative to the teaching of written English* — Oral and written English — Living and learning written English — Expression outruns technique — Language terminology — Learning the laws of language.
4. *Suggestions relative to the teaching of writing* — Writing arising from need — Speed and quality — Individuality in handwriting — Position — Beginning work — Manuscript writing.

Summary — Suggestions for thought and discussion.

Importance of the language abilities in living well. A program of living fully demands the ability to express one's ideas to others. The tendency of man to develop ways of doing this is evident in all the progress he has made in changing his mode of life from that of a savage to that of a civilized being. The degree of mastery of language abilities is an index of the degree of civilization. Living with others implies some form of communication. Talking is the common form. Therefore, acquiring a vocabulary and learning how

to combine words to express one's ideas must be one of the first tasks in social living.

In addition to talking with those at hand one often wants to communicate his ideas to those distant in time and place. This necessitates ability to shape letters, and ability to spell and punctuate. Since there is communication of ideas by writing, one must also have the ability to read what is written. The language abilities then include oral language and written language, the latter including spelling, writing, and reading. How are these abilities best learned? How can the teacher guide the living in the school situation so that this learning is facilitated?

Situations in school which necessitate the use of language. Even the most formal school has used language in the natural course of conducting recitations. The questions and answers of the teacher and children made use of words, but in the sense of conveying ideas to others, ideas which the speakers were interested in communicating and the hearers were interested in getting, it is doubtful if there was a great amount of real use of language. The tendency of children to whisper and to write notes is evidence of the desire to express ideas. Strangely, the traditional school has tried often to repress the impulses which were leading most surely to the acquirement of the very skills they thought they were teaching. Children were not to talk or write notes, while, at the same time, they were to compose sentences and prepare waste-paper-basket letters. The school where children plan

and work together frankly faces the language situations which arise, and, because of the value of the work they are doing, the children feel the worth of mastering these abilities.

Setting up the objectives which the class decides to accomplish, coming together to confer upon these, planning how to go about their achievement, frequent coming together for conferences and discussions, reporting to one another progress, difficulties, and successes in the effort made, recording the results of these efforts, and, finally, judging the worth of what has been done and perhaps telling others about it — all demand much use of oral and written language. Gathering data, going to sources of information, taking notes upon what one finds, writing reports to be given to the group, recording the results of one's efforts in the form of an article for the class paper or the yearbook, or for reports by the class to others upon the work — all demand the use of writing, reading, and spelling as well as oral and written composition.

One cannot picture a day of fruitful class work without the necessary use of some of the language abilities. To the degree that the work being done appeals to children as really of worth, to that degree will children desire to put their ideas into effective language form. The effort to master these skills should be the natural outcome of needing to use them correctly. This demands a wholesome, healthy attitude toward the school work.

Learning in relationship to use. The order of learn-

ing a skill seems to be: (*a*) The need for it should be met in a situation vital to the learner; (*b*) the skill itself should be practiced until mastery is acquired; and (*c*) the skill should be continued in occasional use by the learner. Need it; learn it; use it: this seems to be the order which makes it a part of the learner's living. Professor Kilpatrick has shown us that a thing is not learned until the learner sees when to use it, can use it, and is disposed to use it. Such learning implies the three steps just listed. Meeting it in actual situations implies that the learner will thus recognize its need again. Learning it in connection with furthering ends of worth to the learner makes him kindly disposed toward it — he identifies it with his own ends and, therefore, he is disposed toward further use of it.

The principles underlying the learning of a skill have already been given in Chapter IV. If valid as principles, we should find them useful in determining good procedure in guiding children in their attempt to master the language abilities — spelling, oral language, reading, written language, and writing. We shall next consider the teaching of each of these skills, in the order given, and shall show that the proper procedure, in each case, is that which best applies the laws of learning to the process.

1. *Suggestions relative to the teaching of spelling*

The use of prepared lists. Scientific studies have listed for us, with some degree of reliability, the words children of the varying ages should be learning. The

evidence for these lists comes, of course, from things written by the children used in making the study. Much of this writing probably does not come under the type we are discussing, since schools generally have assumed that the writing exercises were to be assigned work, instead of work growing out of the activities the children are engaged in. With a better sort of language work, in line with children's growing interests, the words that come more nearly into the range of children's probable needs can then be listed. While the present lists may be questioned, they are, nevertheless, far better than no lists as guides to teachers in their efforts to watch the learnings that are taking place while the children are engaged in school activities.

The list of words the pupils of a given grade are assumed to need to learn should be in the hands of the teacher. As proper relationships are established between the teacher and children, there is no reason why the latter should not come to know that the teacher is checking their learning in terms of what some people, who have studied the matter, think they need.

As the work progresses, each Friday the teacher should look ahead at the work of the coming week, as she sees it, and select from it the list of words which the children will be needing and probably not know. The words selected should be checked on the list for the semester. As soon as the children enter into the spirit of the work of learning in relation to use, a committee of the class may well assist in making up the list for the coming week. The number of words so selected

should not be large, probably about twenty-five, and should vary somewhat with the grade. The same number should be selected each week. This makes possible a method of recording the results of the week's work in such a way that the successes of the succeeding weeks easily may be compared.

Testing the week's list. Monday morning the entire class is tested upon the list for the coming week. Children should clearly understand that the words are those that will be needed in the work they are planning to do that week, and that the test on Monday is given to find out just what words each one does not know how to spell. This test should be written. It should be definitely understood that doubtful letters and erasures indicate lack of certainty of knowledge. If we would enlist their interest in mastery, we should have the children score their papers immediately after the test is given. Each child should score his own paper, knowing that the teacher will later check the work. This procedure gives immediate knowledge of the words the children do know.

Each child should now record in his spelling notebook the words he needs to learn, noting the date of the test. He should have in this notebook a page ruled off into vertical and horizontal lines. The vertical column should be numbered along the left side in numbers from one to twenty-five. The horizontal column should be dated at the bottom so that each vertical column has under it the date of the day on which the results of a test of twenty-five words are re-

corded. Monday's test-results should be recorded here. The teacher records in her notebook the number of children missing each word in the test. This can be determined quickly by the showing of hands for each word, in turn. In this way the teacher knows what words to teach first.

A week's teaching procedure. Tuesday, Wednesday, and Thursday should be used as teaching days for teaching the words missed and to the ones missing them. From three to five words should be taught each day. Tuesday's words should be the ones most frequently missed. Wednesday's words should be the ones left which have been most frequently missed. This gradually reduces the number being taught as the week progresses, and leaves the teacher to spend her teaching effort with those most needing her help. At the time she is so teaching words other children use their time upon other activities in which they can engage independently and quietly.

The list of words for a teaching day should include the day's portion of words to be taught, plus enough review words to make the total number equal ten. In order that the scores resulting from one's definite study of words may be comparable, the numbers in the various tests — Tuesday, Wednesday and Thursday — should be comparable. Therefore, the number taught each study day should be the same.

Proper teaching procedure. The method of teaching the words should be as follows:

1. The teacher writes a word upon the blackboard,

at the same time pronouncing it distinctly so that the syllables can be heard.

2. The children look at the word, and pronounce it distinctly together, and individually. Correct pronunciation is a distinct aid to correct spelling.

3. The children and the teacher note the difficult part of the word, pointing out the difficulty in a *positive* way.

4. The children practice visualizing the word until they can visualize each letter clearly when the eyes are shut. Varied method here holds interest better.

5. The children try writing the word from memory, checking the results by the copy upon the blackboard. If wrong, more practice in visualizing is necessary. If right, the word should again be written from memory and again be checked. If the child can in this way write the word three times correctly it is temporarily mastered.

6. Similarly, each new word is taught.

7. Similarly, each review word is taught, but less time is devoted to teaching it.

8. The entire list, previously written and covered, should now be exposed for a *brief* review period, in which each child is taught to work upon the words most troublesome to him. If this review period is longer than a minute or so, there may be laxity in effort.

9. Test the ten words just taught.

10. Each child scores his own work, which is later checked by the teacher. He next enters his errors, together with the date, in the proper place in his note-

book. On the page arranged for keeping scores on the ten-word tests of teaching days, he enters his score for the test, together with the date on which the test is taken. It will be noted that there are in his notebook two record sheets for scores, one for twenty-five-word tests, and one for the ten-word tests. By keeping these on separate pages the results of learning are comparable, and the results of testing to find out ability are comparable.

Friday, the entire class is tested upon the words for the week. Recording the results upon the twenty-five-word chart brings the record of Friday's test beside the record of Monday's test. The child thus sees quickly his improvement, resulting from the week's study. The class should come gradually to regard it as unfortunate, at least, for one to score perfectly on Monday and then to miss words on Friday. In cases where children think they have just chanced to get a word right they will see to it that there is no uncertainty about the word by the time Friday comes. The habit formed of noting whether or not one does know a word is valuable.

Other suggestions as to teaching spelling. Note that no definitions need be taught, because words are taught which are related to the activities going on, and the meanings are, therefore, sensed. In general, we may say that one is not really able to define a word until he has acquired its meaning in use.

The difficult part of the word is written only as normally found in use. The use of red chalk, or of

underscoring, for the difficult part has not been found valuable as an aid to learning.

Syllabication comes through correct pronunciation. The only use for it in writing is in dividing the word at the end of the line.

Diacritical marks are useful for learning pronunciation of new words when one has recourse to a dictionary or similar authority. The learning of these should not be confused with the learning of the letters which make up the word. They are better taught separate from spelling.

Saying the letters over in order has not been included as a learning method, because scientific investigation has not found evidence to endorse it as a learning process. Spelling is a written function, not an oral one. No evidence is as yet found to justify time spent on oral practice.

As soon as the children master the *method of studying* spelling, they may be given the list for the month or week and be left to learn the words at their own convenience, knowing that they are responsible at the regular testing time. This could reasonably happen with sixth- and seventh-grade children if, in the previous grades, they have been properly taught a method for learning words. Respect for the work being done in the class will, in time, lead to a desire to do it in a creditable way, and will develop a pride in spelling words correctly when writing.

2. *Suggestions relative to the teaching of oral language*

The uses of oral language in school. The nature of the activities in which the children engage will determine the occasions for oral English and the children's interest in learning to use correct and forceful English. If these activities are largely coöperative in character, there will, of necessity, be need for reporting, discussing, planning, and evaluating. If the work is of genuine worth to the children, they will attempt to make ideas clear, convincing, and forceful. Attention will be upon the ideas they wish to express, rather than upon sentence structure and language form as such.

In the course of a day's work in an active school there are many situations calling for the expression of ideas. The things that are to be done in the day's work must be decided upon. Genuine living and working together demand that the children share in the responsibility of deciding upon these things. When they help determine what they are to do they thereby assume responsibility for the results of their efforts. The enterprises become theirs.

Such decision involves suggesting different possibilities, discussing the merits and difficulties of these, deciding which possibilities shall be attempted, noting the consequences of the ones chosen, and planning how those chosen are to be carried out. In the course of the day there are many times in which there will be need for discussion of the way the things are being

done. When the work is completed, the class should evaluate it in some way to see that it meets the conditions for which it was planned.

The expression of ideas. The story-hour club or reading club, described elsewhere, provides situations involving much use of oral English. Individuals tell the class what stories they are reading. The children ask about the plot, the author, the characters, and the characteristics of the book. The child, reporting, needs to be able to answer these questions. Often he will attempt to sketch the opening situation of the plot, or list the important characters. He may select an interesting portion to read to the class to show them how entertaining the book is. To make the part to be read more meaningful the child may sketch the situation at the point where the selection begins.

The success of his efforts to entertain depends, in part, upon his ability to make his statement of the situation interesting. The language he uses will be a determining factor in his effort to entertain. The children's comments and questions also will be a part of this period. In fact, the whole period is one of practice in the use of oral English. It is practice where the emphasis and attention are centered not upon English form, but upon the desire to express the ideas forcefully and clearly.

Part of the work of a class may be by committees where children are gathering data, performing experiments, collecting samples, making charts, interviewing people, or doing some other piece of work as-

signed to them by the class as a whole. The results of these efforts must be reported back to the class. Discussion will, of necessity, follow.

Teaching correct form. In all these class activities where there is coöperative effort there is practice in the use of language. In such practice the laws of learning are operative. The children learn those language forms which they practice with satisfaction. The satisfaction comes as the use of language attains results in line with their plans. If the ends they are seeking are furthered, they tend to continue the use of such language forms as were used with satisfaction. They do not tend to think of the forms used. Imitation has much to do with the forms they acquire. The ones used by the leaders of the group tend to be the popular ones. The child whose influence is strong among his mates unconsciously teaches his language forms. The teacher whose leadership is strong, through the language expressions she uses, influences the forms adopted by the group.

How, then, does the teaching of correct form come in? Should there be any time given to teaching form as such? Shall the teacher break up this attention upon expressing ideas forcefully, and substitute attention upon language form? There is not entire agreement among teachers in answering this question. The laws of learning and the experience of some excellent teachers of children point, however, to a desirable procedure. Knowledge of correct form should, in time, be gained. It should be increasingly acquired as ex-

perience increases. Correct usage depends primarily upon habit. It is reënforced, however, by an understanding of what constitutes correct form. One who is master of correct English-form not only has habits of speaking correctly, but he understands what constitutes correct form. The latter should follow, rather than precede, learning the correct habits.

Essentials in teaching the use of correct form. One of the first essentials then seems to be that there be much need for expressing one's ideas with effectiveness. This will bring much practice, in which the child unconsciously uses the best English he knows. There must be correct form which the child hears in use. He acquires better forms in this practice, when there are those in the group who use better English than he does, if those with the better habits have influence with the group. The teacher should always be such a person. Practice in contact with better forms where there is the impulse to talk seems to be the first essential.

Another essential seems to be the development of a desire to be able to use forceful, correct English when trying to convey one's ideas to others. This comes as the work of the class proves worth while, and the needs arise for speaking with effectiveness. The child, who is consistently indifferent to the ordinary schoolroom methods of awakening his interest in correct English usage, may acquire a very different attitude if he is selected by his class to report to another class concerning an enterprise in which his class is engaged. An

appointment to make an announcement in assembly, in which he speaks for his classmates, makes him feel the importance of speaking as well as he can. Responsibility for conveying one's ideas to others with effectiveness seems to be the clew for creating a desire to master correct English-form when speaking. Desire to speak with accuracy and ease must accompany any efforts to learn much ability.

A third essential is instruction in correct form in such a way as to bring improvement in usage. Individual errors are best corrected at the time when the impulse to say the thing is present. To stop a child when in the midst of a sentence or speech seems dangerous because it may break the continuity of thought, and this also is important. A speaker who cannot keep his thought ahead of his words is usually a poor speaker. We want to develop the habit of thinking while standing and talking. Some believe these two apparently contradictory principles may be reconciled by the simple method of slipping in the correct form without disturbing the continuity. If the child uses the wrong form of the verb, the teacher in a helpful manner slips in the correct form, without requiring that the speaker do anything about it. If right relationships between the teacher and children prevail, the child will tend to repeat after the teacher this correct form, and go right ahead with the thing he is saying. The class should expect that errors of this sort will later be taken up not as errors, but as needs for practice and attention. The assumption that the

class members want such incidental help in overcoming difficulties may be made, and it will soon become the assumption of the class.

Still another essential is that there be time set aside for practice upon needed forms, where usage does not give sufficient practice, and for explanation of these troublesome forms. This is the time for definite language teaching. The class should come to regard this time as set aside for remedial practice and for the acquirement of increased understanding and mastery of correct form. Sometimes the entire class should receive instruction at this period; at other times only those who need the remedial work should be in the group being taught.

An indirect method of improving one's choice of words in speaking is much experience in reading from writers who use choice English. The recent trend in reading, where children read many books individually, gives evidence which suggests that children tend to use in their oral English the words and phrases they find in frequent use in the books they have been reading.

Definite instruction. Success in developing increasing ability in oral English depends, in part, upon what is done at the periods devoted to definite instruction in English. The children must learn to regard the period as an opportunity, not as a time for performing imposed tasks. The work must clearly be related to the needs arising in the use of oral English. The drill should be conducted in such a way that the

child can see results from his efforts. The practice exercises must obviously be needed. The principles underlying drill discussed in Chapter IV are applicable here. The amount of practice needed depends upon the difficulty of the form being learned, and upon the amount of practice the child is getting in actual talking. The more practice in actual use the less practice is needed where practice materials are used. Practice in actual use is of more value in habit-formation than is practice with made materials.

Sequence and gradation. The question of sequence and gradation of language form is a troublesome one. Some argue that teaching in response to needs arising in use makes for no sequence in instruction. This is not necessarily true. The teacher has an influence in guiding the things undertaken, and if she is master of language form and its actual use she can see possibilities involved in proposed activities. Further there is need for decision as to which forms shall be taken up in explanation. Some may be used and used correctly without the child's understanding the underlying reasons for the form. Teaching any form means the decision to teach it next, rather than some other form which also has arisen in the work. Further than this, there is not agreement among teachers that language form has a rigid hierarchy of difficulties which demands one and only one sequence. Many recent courses of study have given attention to this question, and the writers seem to have arrived at an approximation of the gradation of work which is not in conflict with the

needs of children who are learning in relation to use.

When once a correct form is taught, there should be the responsibility to use it. This means that the teacher must watch for the situations calling for it and see that the usage is correct. Many schools fail because teachers have assumed that language work is to be taught as a thing apart from use, and that, once a thing has been taught, the teacher's responsibility is met. Further reference to what has been taught, other than in tests, is not made.

3. *Suggestions relative to the teaching of written English*

Oral *versus* written English. What has been said relative to the teaching of oral English is applicable also to the work in written English. The same laws of learning apply in both cases. The various techniques in written English are to be learned in the same way. The work must be clearly related to the needs arising in putting ideas into written form. The need for a technique should be followed by learning it, and this, in turn, by further use of it. Need it, learn it, and use it. This seems to be the sequence in mastering techniques in written English.

There seems to be one difference, at least in degree, between learning oral and written English form. The written forms are more objective to the child. The oral form calls for a more subjective attitude of mind. Some children find this not so easy. On the other hand, there are more opportunities for the practice of

oral English than for written English. One difficulty in teaching written English forms is the ease with which the work can be isolated from use. Written exercises in English are easily made and imposed upon children; an excess of these often results in aversion for any form of learning English techniques.

Living and learning written English. An enumeration of some of the situations calling for the use of written English, in the course of the work of a class, may be suggestive. If a class of children are living together fully and are engaged in worthy enterprises, they will have much use for written English. The things they are doing are so important that they will feel the value of some form of record of what they are doing. A class paper — weekly, daily, monthly, or annual — is a natural outlet for the desire to record their experiences. Such a paper, if worthy, will call forth the best efforts of the children to express what they write clearly and in good form. A class weekly, if properly conducted, will provide all the situations in the learning of correct and forceful written English that a class has time to learn. The sorts of things naturally needing space in such a paper will give variety, sufficient to call for many techniques, and a varied vocabulary.

Experiments tried, data gathered, and trips made should be reported to the whole class. Letters of information, letters of inquiry, letters of invitation, and letters of thanks all come into use in the course of doing the many things a class of active children may

legitimately do in a year of work. Original stories often are prepared for the entertainment of the class members, original poems come as genuine expressions of the children's reactions to the many rich experiences they are having. In fact, it is impossible to conceive of a program of worthy, sincere effort without much use of written English, even in the beginnings of first-grade work.

So much material arises which fittingly must be put into written form that a danger often appears in that the children are attempting to write more than they can write well. Guidance is needed to keep the attempts within the range of the children's ability to do the work successfully. Writing much, with little time given to doing the work correctly and effectively, will soon destroy the child's joy in forceful, convincing English.

Expression outruns technique. The desire of the child to express himself in English, demanding techniques beyond his ability, is especially apparent in the first grade. The old notion was that the child must wait to record his ideas until he has the requisite techniques. This meant postponement of creative expression until the third or fourth grade, or even later. By the time the techniques were learned the creative impulse was lost.

Successful first-grade teachers find it better to keep the creative, expressive impulses active. As rapidly as he can do so, the teacher encourages the child to attempt writing such part of his ideas as he can with the

technique he is mastering. A visit to a primary room may find the teacher at the blackboard taking down the class's composite story of the trip they made to the market, or recording the things they plan to do for the week. Thus the children, from the beginning, became accustomed to the use of writing to record things of importance.

The question of sequence in techniques learned is not so serious as some have supposed since the hierarchies of learning the techniques in written English are not rigid. It is often a matter of guidance in the selection among the techniques to be used.

Language terminology. Terminology should be taught when the ideas are discussed. When the children come to recognize the class of words known as nouns, they should learn to use the term, noun. Similarly, the terms subject, predicate, modifier, etc., should be taught. Care should be taken to be sure that the idea precedes the term. There is nothing to be gained by talking about "name words," and refraining from using the term "noun." The important thing is to be sure of the idea in the experience of the child.

It is impossible to discuss methods of improving one's way of expressing an idea if we refrain from the use of terms to identify the thing being discussed. Terminology essential to the discussion of sentence structure gradually becomes a part of the vocabulary of a class engaged in worthy living and in using the English language in the course of their activities.

Learning the laws of language; grammar. As has been pointed out elsewhere, principles and laws underlying experience are not really learned until one has enough instances of the laws at work to be able to recognize the common element in the varied situations. The law of learning inductively is applicable in learning to understand the principles governing sentence structure. Therefore, the first attention should be given to providing many rich experiences in which the children use English. Gradually instances multiply where a given principle is working, and the children come to recognize the common factor in the varied situations. We say then that they have learned the law. Thus the principles of grammar are learned.

The study of these laws of grammar calls for a subjective mode of thinking, sometimes called reflective thought, which follows, rather than precedes, active, expressive thought. We should, therefore, expect the study of the laws of grammar to come later in the course than the early elementary grades. Some of these laws will be sensed in the intermediate grades, some not until later years.

The important work of the elementary grades is to see that there is much experience and much use of written English in furthering experience in ways that demand of children their best efforts, and further to see to it that instruction and practice in techniques follow needs that arise. Care should be taken to keep terminology up to the needs of the children in refining and discussing their efforts. When children

have had enough experience to cause them to begin to see common factors and to ask about them, then is the time to help them see the underlying law, commonly called a rule of grammar. Some children will never really comprehend these laws. Some will see them early. All can, however, develop some skill in using the common language forms.

4. *Suggestions relative to the teaching of writing*

Writing arising from need. As with the other skill subjects, writing skill should be learned in relation to use. The same sequence applies as has been given for the teaching of each of the skills. Meet the need for the skill in a real situation, learn the skill, and then use it in further real situations. This means that the learning of writing should begin with writing something which the children need to write in the course of their living together in the school room. Obviously, with little children just entering school, the first need that arises is the ability to write each his own name upon his possessions or his work. This then is probably the first thing he needs to learn. If the name is very long and difficult to learn, the initials may be substituted.

Such a proposal runs counter to the systems of writing in use in many school systems. These usually require much practice upon ovals and other exercises before the child is permitted to write anything having meaning for him. They also place much emphasis upon position, usually implying that there is but one

correct position. Scientific investigations do not support these contentions.

If children are engaged in carrying on their affairs in ways that to them are important, they will want that such things as need to be written be well done. If letters of invitation are written to the children of other classes or to mothers, certainly the writing should be the best possible. Similarly, place cards and letters of thanks, of inquiry, of appreciation, appeal as worthy of their best efforts. Materials for yearbooks and for class papers have a similar appeal. If the bulletin board is so conducted as to become prominent in the classroom, the children will take a pride in keeping all writing that appears upon it of the best. These are some of the many situations arising in the course of the work which will prompt the children to want to write well. It is believed that motives of this sort are the essential motives in spurring children to improve their skill in handwriting.

Speed and quality. Speed has been one of the objectives held out to children. Measurement of the achievement of children indicates that it increases particularly from the second to the fifth grades. Thirty letters a minute for the second grade, and seventy-three letters a minute for the eighth grade, were the average rates found in the study of forty-six cities by Dr. Freeman.

Speed should always be in relation to quality. Quality is of far more significance. With the advent of writing machines, we find a change in the im-

portance of speed. In most situations, where speed is needed, machines are used. Handwriting is used in situations of minor importance or in situations where the personal element is significant.

Those who respect scientific studies of handwriting incline to the opinion that a quality rated as 60 on the Ayres Scale, or 13.5 on the Thorndike Scale, is good enough for an objective. Dr. Thorndike asserts that quality 12, on his scale, is sufficient. This quality of 60 is often given as eighth-grade standard of achievement, but it is reached by many sixth-grade children. Dr. Thorndike asserts that, if typewriters were available, it would be better for children in the seventh and eighth grades whose speed was 60 letters a minute and quality 13 to devote the time to machine writing.

The use of scales for judging quality of writing is advocated in the classroom. It has already been mentioned that the best way to secure improvement in quality is to be engaged in affairs of such importance to the child that good writing seems imperative to him. A second aid to improvement is to make frequent judgments of the quality of one's writing. Keeping a record of these scores is an aid. Occasional class comments upon the individual's improvement are helpful, particularly if some of the things he is writing are for the class enterprises.

Appreciation of writing has in it an æsthetic element. This may, in part, explain the difference between the quality of the writing of girls and of boys. Dr. Starch found girls better than boys in quality of

writing in every grade but the third. The differences do not justify differences in teaching. Perhaps, as we have a more vital type of classroom work where the writing is in relation to worth to the children, the work of boys will be of better quality.

Individuality in handwriting. The relation between good writing and intelligence of adults, as found in investigations, is zero. With children a slight positive relationship has been found, but not enough to be significant. Some investigators assert that handwriting is an index of character. It is at least a matter of individuality, and such individuality should be respected. Systems which fail to regard the development of individuality are to be questioned in this respect.

Too much time can be devoted to practice exercises. Seventy-five or a hundred minutes a week have been found to provide no better results than fifty. It seems wiser to keep practice in relation to specific uses of writing.

Position. The exclusive use of arm muscular movements cannot be justified. Studies of the movements of many writers indicate that there is a combination of arm and finger movements. Arm movement as a factor in writing is an aid to speed.

While there is no one correct position there are some factors to be kept in mind. The forearm should be at right angles to the line of writing. The weight of the body should be supported by proper sitting with both feet on the floor. The desk should be faced squarely.

The weight of the arm should be supported by the forearm, that of the hand by the fingers. The pencil should be held lightly.

Some simple things to be kept in mind as a means of keeping up quality where there is a desire to write well are:

1. Use two heights of letters above the base line.
2. Keep slant of letters uniform by watching that downward strokes generally are parallel.
3. Keep all letters resting on the base line.
4. Think of letters as consisting of a combination of two elements — the circle and the straight line.

Beginning work. As already suggested, the work should begin with the writing of the one word needed, such as the child's name. Then should follow simple needed words, such as the name or number by which the room is known. Letters to friends at this early stage may be written where the letter is dictated by the child to the teacher. The child may write "dear," and sign his name. This makes it his own personal letter, even though he has not managed all the techniques.

Professor Moore suggests that in learning to write the word, the child watch the teacher write it, look at it, and then try to write it from memory after the teacher has erased it. It is the contention of Professor Moore that writing from copy may lead to drawing the letter out.

The first work may profitably be on the blackboard. Then unglazed paper and beginner's pencils should be

used. Dr. Freeman advises beginning with the pen in the course of the third year.

Manuscript writing. Manuscript writing has recently come into our schools from England. It is being used in a number of private schools and in some public schools. Study is being made of the results so that, in time, definite data as to its value will be available.

It has some values already recognized. It is easy to learn. It has an appeal to many children. It seems particularly suited to developing an interest in an attractive page. It seems useful in the way it makes an appeal to neatness. It seems to be very easy to make the transition from it to cursive writing, with its connected letters.

There is a difference of opinion as to its value for speed. Data thus far secured do not seem conclusive.

This form of writing is of value to the teacher. It is much easier and more attractive than is the use of a printing set in making charts and practice material. It is very effective for blackboard work. Teachers are advised to acquire the ability to use it for blackboard and chart work.[1] Until further evidence is secured as to its values, it is not advised that children in the public schools be taught it instead of cursive writing. However, children should not be prevented from using it, in addition to the cursive form.

Summary. Increasing mastery of the language

[1] See Wise, Marjorie: *On the Technique of Manuscript Writing.* Charles Scribner's Sons, New York.

abilities of oral language, written language, spelling, writing, and reading is essential in a program of living fully in a school group. All the work in such a school involves the use of these abilities. Learning them in relation to use seems to insure economy in learning, and greater probability of their functioning. The procedure in teaching spelling, writing, oral and written English, and reading is, in each, an application of the laws of learning to the situations calling for their mastery.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. How many words can you spell which you never had in a spelling lesson? How did you learn them?
2. Why not have oral spelling?
3. What is the value in a spelling match?
4. What is the value of the pre-test?
5. Why not spend the spelling time in using the words in sentences?
6. Should the child spend an equal amount of time on every word?
7. How does one learn to define a word? Is this spelling?
8. What learnings in oral language come from the meeting of the library club?
9. How influential upon oral language is the teacher's vocabulary? How can she improve it?
10. What is the influence upon a class of the language of an individual member?
11. Select one child whose vocabulary you are to study, particularly when he is at play and away from the classroom. Make your observations as inconspicuous as possible. Keep a complete list of all the words you hear him use. Check this by the Thorndike Word List.
12. While a class is having a library club meeting, keep a

list of the words you hear used in conversation which reflect the vocabulary of the books they are reading.

13. You have a spelling vocabulary, a speaking vocabulary, a reading vocabulary, a hearing-in-conversation vocabulary, a definition vocabulary, and a pronunciation vocabulary. Which is the most inclusive? Which is the shortest? When and how should each be taught?
14. Using a stop watch count the actual time two or three children have opportunity to say something in a half day of school. Is it enough to develop much skill in oral English? Is answering questions an effective method of developing skill in oral English?
15. How much written English work should children in each of the grades attempt?
16. What is the harm from long themes?
17. When does a child really understand what a paragraph is? What necessarily precedes this understanding?
18. What learnings come from the class paper?
19. Why should poems be written in school? Give more than one reason.
20. What shall be done with children's poems?
21. What dangers lie in publicity of them?
22. List the items in grammar included in the school text. Find for each a situation in the work of the children where understanding of the grammar will promote better usage.

CHAPTER IX

THE EXTENT OF RESPONSIBILITY IN TEACHING READING

Habits and appreciations — Reading objectives — Desirable skills and abilities — Development of reading skills — Vocabulary building — Recreational reading of stories, books of travel, and biographies — Reading clubs — Results of this work — Records of books read — Bibliography cards — Book reviews — Library habits — Book arrangement and care — Clippings and pamphlets — The public library — Use of newspapers and magazines — Class experience records — Book construction — Paper making — History of records — Appreciation of choice literature in developing taste — Dramatization — Meeting the responsibility in teaching reading. Summary — Suggestions for thought and discussion.

Habits and appreciations. The task of the elementary school in teaching reading includes more than the attempt to teach children to read with a measure of speed and comprehension. If we undertake to teach children to read, we thereby assume a responsibility in developing taste as to what they read. Habits *of* reading must be developed along with habits *in* reading. The skills in reading should include not only ability to get meaning from the printed page, but also ability to find existing material pertinent to one's interests and needs. The responsibility of the school is not met if it fails to establish habits which connect the children in a desirable way with the library and with current newspapers and magazines. Appreciation of the construction of the book and related processes is involved, as well as some conception of the

achievement of the race in developing the processes used in recording, in books, newspapers, and magazines, the experiences of life.

Observers have watched with interest the work that has been done in the last fifteen years in analyzing the specific steps in learning to read, and in measuring the specific reading abilities of children. The resulting changes in method in teaching reading and in the measurement of achievement in reading as well as the increasing activity in preparing texts for children and helps for teachers, have been noteworthy. There have been discussions of oral and silent reading, of speed and comprehension, of regression movements, of flash cards, and of practice materials. These topics have received so much emphasis that one has been led to wonder if here and there earnest teachers are not being so overwhelmed by the means that they are failing to see the ends involved in reading.

Reading objectives. Not all teachers will agree to any statement of the objectives in teaching reading for the very good reason that they could not agree as to the objectives in education. If the work of education is to teach people to live rich, meaningful, efficient lives by the process of thus living from day to day in school until such living becomes a habit, the following objectives in teaching reading seem worthy of consideration, namely, to develop:

1. The abilities involved in reading to get thought, along with satisfactory degrees of rapidity and accuracy.
2. Habits of reading, and of using such available facilities

for reading as the public library and its many helps provide.

3. Tastes in reading, and wide reading interests.
4. Acquaintance with writers, their characteristics, books worth reading, and fine characters in literature.
5. Interest in poetry, in poets, and in favorite poems.
6. Knowledge of the evolution of books, of writing and printing materials, and of printing, publishing, and illustrating processes.
7. Understanding of book construction, sufficient to inspire respect for books and give an appreciation of race achievements in making records.
8. A wide and choice vocabulary.

To achieve these objectives there are several aspects to the work in reading to be done. Each one of these aspects represents a phase of the work to be carried on throughout the elementary school, after it is once begun. The items under each are given in a possible sequence. For some of these phases there can, at present, be no positive assertion as to correct grade placement of the initial steps, nor can we now be sure as to the grade where major emphasis is to be placed. This is because not enough careful study has been made as to children's learnings in these fields. For some of these aspects of reading the elementary school can only hope to begin the work, leaving much to be done in the high school.

Desirable skills and abilities. A list of reading skills and abilities usually includes: (*a*) learning to get meaning from printed words, to depend upon reading for getting directions and information, and to use reading in getting stories from the printed page;

(*b*) building a reading vocabulary; (*c*) learning to recognize resemblances between words, and to identify new words by familiar parts and sounds of letters; (*d*) learning to read in phrases; (*e*) learning to read in such a way as to entertain others; and (*f*) acquiring clear enunciation and pronunciation.

It seems desirable to add to the above list, particularly for the intermediate grades, the initial stages of acquiring the following abilities; (*a*) stating the aim or purpose in a selection read: (*b*) increasing the depth of comprehension; (*c*) widening the range of reading interests; (*d*) finding the main thought in a paragraph, and the sequence of thought or argument in several paragraphs; (*e*) finding the important point in an article, and its supporting details; (*f*) reproducing what is read; (*g*) gathering and organizing data; (*h*) looking for the validity of data, weighing evidence, holding suspended judgment, and learning to interpret critically; (*i*) outlining; (*j*) summarizing; and (*k*) skimming and scanning.

Development of reading skills. The development of these abilities is dependent upon the type of work the children are engaging in, in their entire school program. It is doubtful if the items listed can be effectively taught if the teacher uses only prepared practice materials. Exercises of this sort would not be wholly unattractive to the children because of the satisfaction that comes through knowing if one has the correct answer, but the learnings would be narrowly associated with the effort to secure correct an-

swers, rather than with meanings that come through learning the abilities while using them to further one's ends.

The activities involved in carrying out the work suggested in the social studies involve many of these listed abilities. Reading newspapers and magazines, consulting books of reference, following directions in experimentation, consulting the statements of those who have investigated, reporting the findings to the class, and compiling evidence from various sources are types of activities involving the learning of reading abilities, provided the one who does these things is interested in the results. Learning here seems to come best by using the ability in situations demanding its use.

In general, for the major part of the work in reading, it seems better to rely upon the use of material that has content of value to the children, rather than upon prepared practice material. As the children use this material, which satisfies their interests and meets their needs, their difficulties in reading ability become apparent to them and to the teacher. Then prepared practice material should be used for the drill needed to improve these abilities.

Vocabulary building. Work in vocabulary building in the six grades of the elementary school is usually regarded as including: (*a*) learning to recognize words met in reading; (*b*) devoting some time to drill in word-recognition; (*c*) following rhyme interests by encouraging and thus directing attention to distinguishing

sounds of words, and to developing a wider vocabulary; (*d*) learning to recognize word similarities, and to use them in attacks upon new words; and (*e*) increasing vocabulary through the study of phonetics, prefixes, suffixes, synonyms, antonyms, idioms, and word analysis. A sixth may be added: (*f*) developing an interest in precise and pleasing diction, accompanied by a fluency of speech which makes the attempt to express one's ideas not wholly a task. All this means interesting children in the development of a large vocabulary.

Many aspects of vocabulary building are now being attempted in our schools. The thoughtful student of present-day teaching methods would not suggest that more time be given to this work. It is possible that less time for this work, as such, would be better. The vocabulary work that is done, though, should be done with definite reference to those specific undertakings of the class which call for skill in the choice and use of words. Drills should be conducted in response to definitely recognized needs. Closer integration of the work in vocabulary building with the uses to which children are putting their vocabularies might greatly vitalize the work, and consequently reduce the time usually allotted to more or less routine drill upon words.

When a class is having many worthy experiences we may find instances showing (*a*) effort to express one's ideas concisely, because one wishes to make an accurate report of an experiment, or attempts to put

into words one's feeling when in the presence of a lovely bit of nature, (*b*) determination to say in words what one thinks about an issue, or (*c*) the purpose to narrate an interesting experience.

Such situations as these call upon the individual to choose very carefully the words he uses to express his ideas. Such choices call attention to shades of meaning in words. In such situations children welcome help in learning how to find the right word. Effort of this kind will develop interest in acquiring a choice vocabulary.

Recreational reading of stories, books of travel, and biographies. "Perhaps it is in their outside reading of stories and in their study of geography, history, and the like, that many school children really learn to read." [1] Is it possible that the school of the past was not wholly right in the attitude which it took toward children's bringing books to school to read in their spare moments? Have we attached too much faith to our belief in the potency of readers and the reading class in teaching children to read? When and how did we acquire facility in reading?

Here and there one finds a teacher who is encouraging children to read story books, and to become better acquainted with those that are available. Such encouragement sometimes takes the form of a "story hour," a "reading club," or a "library club."

When children enter the first grade they have no

[1] Thorndike, E. L.: In *Journal of Educational Psychology*, vol. VIII, p. 332. (June, 1917.)

ability in reading, but they have a genuine love for stories and a delight in picture books. Utilizing these two interests of the children, a first-grade teacher has been known to have an occasional period on the program given to the story-hour club. It consists of two parts. The first is a silent period, in which each child looks at a book which he selects from the library table. The book consists largely of pictures, beneath which are rhymes, couplets, or simple legends. The themes of these books are child favorites, such as "Peter Rabbit" and "Red Riding Hood." The children are taught to use paper bookmarks to indicate the pages which they wish to show to others in the groups.

The second part of the story hour is a group period, in which individual pupils show the class the pictures they want to share. Sometimes a child asks the teacher to read to the class the legend under the picture. As reading ability comes, through varied learnings which are taking place in class activities, the teacher finds children who can read the legends to the class. By working among the children during the silent period, she is able to further the preparation of the children for this simple beginning in the art of reading to others. In the course of time this reading in the story hour slips over into reading stories, and children begin to find the satisfaction of getting a story from the printed page through their own individual efforts, and the added joy of sharing the story with others.

By the time the children reach the latter part of the first grade some genuine ability to entertain the class by reading aloud is developed. This ability improves by continuance of the procedure through the second grade. In addition, the pupils attain some power and joy in individual silent reading as a leisure occupation.

Reading clubs. With the third grade this period may come to take on a more definite form in terms of "a reading club," or a "library club." Children at this age tend to like organization. Through his chairmanship, the club president has a valuable opportunity to understand the responsibility which each child assumes in entertaining the other members of the club by discussing a book and reading a portion aloud. In time, wise distribution of this leadership gives the entire class a finer attitude toward reading as a means of group entertainment.

The teacher is a member of the club, participates in the discussion of books, expresses her judgment relative to selections read, and now and then reads a selection herself from a book she has read and so widens the children's range of interest in books.

Results of this work. Thus we find children: (*a*) learning to entertain one another by reading aloud interesting parts selected from their individual reading, and to discuss the books which are being read; (*b*) developing the habit of "having a book on hand," and of noticing interesting portions to share with others; (*c*) forming the habit of keeping a list of books which they wish to read as soon as possible; (*d*) developing an

interest in the personal possession of books which will lead to the starting of a library; (*e*) developing an attitude toward books and reading for pleasure and for information that gives promise of becoming permanent; (*f*) building an interest in sharing worthy reading experiences; (*g*) acquiring a knowledge of worth-while stories and writers; and (*h*) coming to have favorite authors and to know their characteristics. This should lead to a broadening of tastes, and to a consideration of different kinds of stories and of plot as a factor in stories.

Probably the specific organization of the work around a club will not continue to be of such gripping interest throughout the intermediate grades, but interest in reading books, in sharing them with others, and in discussing writers, their characteristics, and types of plot and style should continue and grow into greater worth.

Records of books read. The work outlined in the preceding section suggests that there is a reasonable question as to whether or not the elementary school should teach children methods and habits of keeping bibliographical records of their reading. Some teachers of the first grade have found it advisable to encourage the children to keep, for their "yearbook," lists of the books which they read in the course of their first year of reading. It is doubtful if any such listing should be exacted of all the children, but those who develop an interest which leads to the reading of many books may find it a worth-while thing to do, and their

work in this connection may prove of interest and stimulus to the rest of the class. These suggestions apply with equal force to second-grade children who are reading whole books.

There may come a place, at about the beginning of the third grade, where it would be advisable for the teacher and class to plan to keep a record of all the books read by the individual pupils. This might take the form of a large chart kept on manila paper and posted on the wall.[1] The title of the chart might be "Books We Have Read This Year." The chart should be ruled into blocks about six or eight inches in dimension, one block being assigned to each child and the name of each child placed at the top of his block. When a child finishes a book he reports it to his teacher by writing upon a slip of paper his name, the name of the book, and the date that the book was finished. The teacher enters these data in the child's space on the large chart. In this way a record of the books read by each child is easily kept. Any child can refer to it to get suggestions of books for further reading. Reference to the dates would make it possible for one to notice the progress made by the children, both in the number of books read and in the increasing difficulty of the books.

Bibliography cards. Should such a procedure be followed in the third grade, it seems reasonable to suggest that the fourth-grade work, with reference to

[1] This is after the plan of Miss Mary Lewis, Horace Mann School, Teachers College.

reading library books, should take a step in advance. Some teachers have found it feasible to teach the children of this grade the method of keeping individual bibliographies on library cards. When a book is finished, the pupil enters on one of these cards the author, the title, and the date when finished. Some teachers believe it advisable to add to these facts a brief annotation which states the child's opinion of the book. Some classes of children have found it advisable either to make or to buy boxes in which to file their cards.

From such experience with keeping a record of their individual readings, it is an easy step to lead the class to attempt the listing of books which they, as a class, recommend to other children of their age as good books to read. A step further suggests itself in terms of the desirability of teaching children how to make a bibliography of material which they have gathered and found valuable in their study of some significant topics in geography, history, or industrial life. For example, to limit a class's study of cotton to the material contained within the textbook in geography seems unfair when there is available an abundance of rich material. Furthermore, a real value is attached to the child's gaining consciousness of his own ability to gather and organize relevant data. Work in geography, history, and industrial life should include such use of materials, in addition to the text, and the teacher should see that the children acquire system and method in organizing what they gather. The making of a bibliography of

the references which are valuable is a wholesome way of furthering the teaching of such organization.

The keeping of bibliographies used in work is valuable. The correct form of such bibliographies and correct methods of filing them are obviously to be taught at the time when the need arises. Such teaching should include the making of subject and author cards, and the correct method of filing both in one alphabetical list. The form, of course, should be in harmony with the forms prevailing in public libraries.

Book reviews. As the children gain ability in keeping a bibliography of books which they have read and used, they come to a place where they will find it valuable to be able to review books. Such need for reviews would arise when the class becomes interested in comparing several books on a subject. Some attempt at writing reviews seems worth while before children leave the elementary school, and should be made in the light of ideas as to what constitute good book reviews. The children may gain some notions relative to this question by examining a number of good book reviews in reputable magazines.

Reading and discussion of stories should include consideration of favorite characters and might profitably culminate in some attempts at writing character sketches.

High-school teachers have repeatedly contended that children coming from elementary schools are unprepared for the work of the high schools. It is

pertinent, at this point, to raise the question as to whether or not a program of teaching children to use books and to make a systematic record of what they use is not a step in the direction of teaching children some of the abilities which they will need when confronted with the high-school organization for study.

Library habits. If one accepts the thesis that the work of the elementary school may legitimately aid in acquainting children with books and reading, as has been suggested in the last two sections, it naturally follows that the school must do something by way of teaching children how to use books, where to get them, and how to use the facilities available in a modern library.

One of the first things needed in this endeavor would be to teach children the correct way to handle books. To put children of first-grade age in contact with a table on which are many attractive story books, and then do nothing in the way of teaching them how to handle these books, would, of course, be unwise. These books are common possessions, and the ethics of respecting common possessions and giving them the care needed to keep them available for all the group is obviously innate in the situation where there is a story hour. The use of book-marks for finding quickly the places in books which a pupil wishes to show the rest of the class should be taught at the time when the pupil has need of such a method. Responsibility for library books includes learning how to keep the books in their proper places, so that they are always available

to all members of the class. As the story-hour work develops into the library group, it would seem wise to help the children to develop better notions of the correct way of caring for their library books. Enough books will be in use to make shelves essential for this work.

Book arrangement and care. If left to themselves the children probably will place the books upon the shelves indiscriminately, and it will not be long until difficulties will arise because of the failure to locate quickly specific books that are wanted. This will lead the children to consider correct methods of arranging books on the shelf, and they are then ready to know some of the simpler ways in which libraries arrange their books.

Similarly, as troubles arise in the effort to know where each book is, it will become necessary to develop some method of keeping a record of the books as they are loaned to individual pupils. Under the influence of the library group-work, as already described, children have sometimes developed rules for caring for and charging out the books, methods of selecting librarians, and the custom of discussing in group meetings better ways of taking care of their books. Children who have such experiences are far better able to learn how to use and respect public libraries.

Work with books soon makes it necessary to learn to use the dictionary, to learn to alphabetize material, and to learn the correct form of listing books.

Clippings and pamphlets. The work suggested in

the previous section relative to gathering and organizing material supplementary to the material given in the text on a given topic brings with it one or two other problems. Many valuable clippings are likely to be brought in by the class in connection with an interesting topic studied, and the bulletin board becomes very useful as part of the school equipment. When one interesting topic has been finished and another one is taken up, difficulty arises over the question as to what to do with the material already collected in order to make room for the new material. The children, having found the material valuable, are loath to destroy the clippings already posted. Ways of saving them for further reference will be proposed. At such a time one can wisely teach library methods of filing clippings.

Pamphlets, too, will often be brought in which contain valuable data. The children will find that paper-bound pamphlets are easily damaged if kept on a shelf with board-bound books. It therefore becomes necessary to find some way of making them available when needed, and, at the same time, of protecting them from damage. This is the time for teaching the librarian's method of binding pamphlets.

The public library. The proposal that material additional to that found in the text may be legitimately used in enriching the work means establishing a connection with the public library, and teaching the children to use books of reference such as the *Encyclopædia*, *The Book of Knowledge*, atlases, glossaries,

the library card index, and similar compendiums of information. This work should go so far as to teach the child before he leaves the elementary school to use such material as the *Readers' Guide to Periodical Literature*, *The Publishers' Trade List Annual*, and *The United States Catalog*, when seeking material that is available in reputable magazines and in published books.

All of this work suggested under the reading of books, the keeping of bibliographies, and the development of library habits implies a belief that the schools should teach children to hold tentative judgments upon questions under investigation until they have gathered authoritative, reliable data. The ability to gather, verify, and organize pertinent data will be found extremely useful in any study situation which calls for enriching data.

Use of newspapers and magazines. A program of school work such as has been described obviously includes the use of available newspaper and magazine materials. Since one can scarcely live in the world of to-day and escape them, the school may profitably consider its place in the teaching of their wise use. A method of sharing the interesting materials which children can gather, by way of pictures and clippings from newspapers and magazines, seems in harmony with a theory of education founded upon a basis of fuller living. Such sharing will involve the discussion of interesting topics which the clippings and pictures suggest. This discussion may readily lead into worthy

lines of interest rich in geographical, historical, or industrial-social significance.

The bulletin board in such a program will be a prominent feature. Encouraging children to read newspapers and magazines brings with it the obligation to develop in children efficiency and good judgment in such reading. Time can easily be wasted and wrong tastes may easily be developed. Wholesome discussion of what is brought in, wise guidance in the discussion, and a tendency to follow up significant questions raised, can be productive of really worthwhile study. Regular time may well be set aside for the sharing of materials, for the discussion of questions, and for reports upon materials relating to the discussions, which individual pupils are able to find.

A few teachers of intermediate or grammar grades have found such discussion profitably taking the form of a "current problems club." Such a group may be a vitalizing agency in developing real interests in geography, history, or industrial-social life, and in provoking children into worthy efforts of gathering data which will help them to understand the problems raised. If one lives in a world of newspapers, magazines, and books, is it unreasonable to ask that we learn how to use them? It is possible that a very good way to learn the right uses of these materials is to learn to use them in connection with consideration of the interesting topics which are discussed in them. The school should attempt to teach such abilities.

Class experience records. A suitable complement

to the use of newspapers, magazines, and books is that of learning to make a record of one's own worth-while experiences and thoughts. If a class is having a wholesale program of living and learning, it follows that there are many things in which they are participating which, to them, are valuable. Many teachers have attempted ways of teaching children how to record these valuable experiences, and so we find numerous instances of classes or schools that have developed a practice of issuing a class periodical, either daily, weekly, monthly, quarterly, or annually. Sometimes this product takes form as a single copy of each issue, posted in the classroom and available to any of the members of the class or their friends to read. Sometimes the issue is mimeographed, and each child has a copy. Sometimes an ambitious class prints its output in large enough quantities to sell copies to interested persons.

The form which such a class product takes does not seem so important as does the fact that the class is having valuable experiences, and is able to find some way in which to record these experiences. To the degree to which this product is worth while to them, to that degree will a class give increasing attention to correct form as prevalent in current social practice. They will examine reputable newspapers and magazines to find what constitutes good usage. They will strive to put their English into correct form. They will want to know the rules of punctuation and paragraphing in order that their work may be respected

by those who read it. Style in writing captions in headings, proper arrangement of the type on the page, and even correct spelling and punctuation become important if the thing which is being produced by the class is of genuine worth. The class will strive for some degree of elegance in expression, as well as for correctness.

The effort to produce in the best form possible a statement of one's own ideas or a record of one's experiences provides a criterion by which one is better able to appreciate the products of those who are more nearly masters of the art of writing English. Good magazines, books, and newspapers thus come to be valued as they have not been before.

There is a practice current among some teachers of having children write a group narrative of some enterprise of their own. This then is used for reading material. Such motive in writing is questionable in its appeal and challenge to the children. Best effort at composition seems to come when there is the genuine purpose to tell some one who did not participate in the experience.

Book construction. The use of books should include growth in one's appreciation of books. The real book lover is not merely one who secures great joy in reading books, but one who rejoices in the fact that he lives in an age when books can be beautiful in construction. The effort of the children to make a record of their worth-while experiences results in yearbooks and booklets. These need to take some form, and this

form should be such as will cause children to value book construction.

The booklets of the first and second grades should be so made as to call the children's attention to ways in which pamphlets and booklets are constructed. The binding of pamphlets, suggested in the section called Library Habits, also serves to call attention to mechanical methods which have been found useful in libraries. As children's interest in gathering data develops, numerous needs arise for booklets, notebooks, and loose-leaf binders. Some experience in making a loose-leaf binder or a notebook is worth while, provided it is so taught that the children learn to value some of the steps involved in such construction, such as all-over pasting, methods of inserting leaves of the book into the cover, or methods of lining the board covers. A comparison of many examples of available methods will further an interest in these steps of construction.

Paper making. Work with notebooks, books, and newspapers would not be complete without some attention to the art of paper making. Paper is a material so common in life to-day that at times we are in danger of letting children look upon it as an obvious material, without helping them to realize that it is a product of man's ingenuity in devising a very efficient medium upon which to record his many and varied experiences. Making a collection of many kinds of paper may lead to a consideration of the processes used in paper mills. Comparison of these processes with those used in

producing handmade paper, and a study of the story of the history of paper making, are all worthy occupations of children, and may easily suggest to the children the possibility of their trying the experiment of making some paper. Very satisfying results may be obtained which will lead into genuine appreciation of the developments which industry has made in producing the many kinds of paper now available.

This study of paper making and book construction is not complete unless carried through the experience of making a book similar to the modern commercial book. This includes folding the sheets of paper and sewing them together so as to form the leaves of a book. These are attached to the case cover which the children make. Such experience in making a book lends itself readily to the consideration of proper ways of mending and caring for books.

History of records. Real appreciation of books, newspapers, and magazines includes acquaintance with the significance of these in the life of to-day. It further includes some acquaintance with the story of the developments which the race has made in its efforts to record experiences.

Such a story includes the building of cairns as a means of marking important places; the making of inscriptions on rocks, as some of the rulers of old did in their attempts to make permanent records of their achievements; developments of the Indian in picture writing, both on rocks and on birch bark, and even in their bead and rug work; the use of knotted strings as

a means of recording events; the use of clay in making tablets, upon which were inscribed events of great moment; the making of papyrus and papyrus scrolls; the making of parchment and parchment scrolls; the evolution from a scroll by the folding of the scroll into a book of folded leaves, and later of single leaves; the making of wax tablets, and the use of the stylus in making records on these tablets; the evolution of the alphabet; the stories of some of the great libraries of ancient days, such as the Alexandrian Library; the book of the Middle Ages with the illuminated lettering, developed through the zeal of the scribes in furthering the holy cause to which they had given their allegiance; the use of quill pens and homemade ink in those days, and the religious purpose served by the few books of the Middle Ages; the story of paper making, already mentioned; the invention of printing, and the changes which it brought about in world activities; the significance of the hornbook; the evolution from the simple printing press down to the great modern press; the methods of illustrating books from simple wood cuts to modern engravings; present-day methods of bookbinding, paper making, printing, publishing, and illustrating; and some acquaintance with a few of our modern libraries, such as the Congressional Library, or the Boston, New York, or Cleveland Public Libraries.

Appreciation of choice literature to develop taste — chiefly short selections. It would seem almost superfluous to suggest that an elementary school is not

doing its full work in reading unless it takes some time to acquaint the children with some of the choice things in literature. Nursery rhymes have had their place in the lives of young children, and they should continue to do so. Likewise, folk tales, stories of child life, seasonal poems, and poems about the great heroes of the past have had their claims upon children's interest. The schools ought to further the child's love of poetry, so that he comes to have a conscious choice of favorite poems and favorite poets. An examination of courses of study made by teachers would suggest that they have failed to see that children need some humor in the literature which they read. The study of short selections by a class should include the bringing together of those gems of literature which are appealing to children of various ages. There are times when children will find poems about the sea of such interest that they will delight in seeing how many different ones they can bring together. At other times, famous rides, or poems describing trees, or poems narrating the achievements of famous heroes, have their appeal.

The work with short selections should give opportunity for class consideration of themes available in short poems. If properly done, this work will lead children to a consciousness which may develop slowly but which, in time, will help them to become aware of poetic form and the varied styles which characterize different writers. If the time which the elementary school gives to reading poems can be so husbanded as to lead children, by the time they leave the sixth grade,

to have favorite poets and favorite poems, to know some of the best types of poetry which prevail among writers, and to enjoy them now and then when reading together, it is believed that the elementary school will be doing a worthy service in enriching children's lives.

Dramatization. It has already been suggested that children may profitably learn to read to one another interesting selections from their individual reading, that they may learn the joy of entertaining one another successfully by their readings in their clubs. Such social use of reading may be furthered by an occasional dramatization of interesting selections. This dramatization, if rightly handled, will increase the children's understanding and appreciation. It may serve to give vividness to stories or poems that are read. In the elementary school such work should be kept quite informal and spontaneous. Occasionally, it may culminate in a pageant or a play as the consummation of a unit of work. Such activities may lead naturally to the reading of some plays of merit, which will, in turn, serve as criteria in lifting the children's standards as to what constitutes good dramatization. It seems quite desirable that children, before leaving the elementary school, should have a little taste of the joy to be found in acquaintance with drama.

Meeting the responsibility in teaching reading. If the work suggested in these topics is attempted, how much time will be required? Will it all be classed as reading? Is some of the work listed really a worthy type of geography, history, and industrial study?

What sorts of reading periods should be needed? What equipment would be needed for these reading periods?

Such a program implies close integration of the work of the school. Both oral and written language are involved, as well as much work in history, geography, spelling, industrial and social life, art, literature, and even number relationships. The aspects which are strictly classed as reading will require several types of work. Time should be set aside for: (*a*) a library-club meeting once a week; (*b*) one or two periods a week for the study and enjoyment of short selections; (*c*) one or more short periods a week for vocabulary building; and (*d*) some drill periods, varying according to needs arising for developing the reading abilities listed under Reading Skills and Abilities.

Obviously this program would call for teaching materials suitable for these four types of reading periods: (*a*) a class library of complete stories, books of travel and information, and biography; (*b*) mimeograph facilities for supplying each child with copies of the short selections studied; (*c*) materials for vocabulary work, individual notebooks, and chart-making facilities; (*d*) a set of drill books, sometimes spoken of as basal readers, preferably in the hands of the teacher for use in developing reading abilities through practice exercises: and (*e*) test materials, including a supply of standard tests for measuring the measurable results.

The development of library habits, the making of a

bibliography, the keeping of records of class experience, and the use of newspapers and magazines are things which will come through use in relation to all work of the class. This need not increase the amount of work of the elementary school, but rather calls for teaching through the use of more vital material, integrating more closely the work of the class, and developing the meanings in the children's experiences. If such is attempted, will there not be less need of practice material as such — a kind of material which often loses much of its value because of its isolation from the child's experience?

Summary. The responsibility of the elementary school in teaching reading is truly great. It should develop not only reading skills and abilities, but also habits of reading, tastes and appreciations in reading, and knowledges and habits which enable the children to enter into their inheritance of rich reading facilities.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. Make a bibliography of material you can find upon two of these subjects:

Water supply of cities	The hand-copied book
Roads	Flower gardens
Soils	The post office
Bridges	Cathedrals
Uses of clay	The story of flying

Sort your references into those the teacher can use and those the children can use.

2. What suggestions can you make for caring for the

pictures and clippings children can bring in? What uses do you see for them?

3. Start a collection of clippings and pictures which you believe will be useful in teaching children. Plan your method of filing so that the materials will be immediately available.
4. Start a list of interesting stories suitable for children's reading in each grade. How many books will be needed to make the nucleus of a classroom library?
5. Suggest ways for the children to care for the books in their room. How far should children of the various grades go in the matter of learning library method of listing books and of lending books?
6. In what grades should the children keep individual or group records of books read?
7. Start a list of poems which you think will prove favorites with children. Include in this list poems which you find in magazines or other scattering sources. How will you keep these scattering poems immediately available? Under what topics will you file them?
8. How many children's magazines do you know? Compare children's magazines published in this country with some published in England and France. Consult a good librarian for help on this. Which of these magazines will you select for the class-library table in the school you teach?
9. Examine five recent magazines in the library. Classify the articles into two groups: those a teacher of children should read carefully and those she probably should only skim.
10. Get copies of *The National Geographic Magazine*, *Travel*, and *Asia*. Have a group of sixth grade children examine these and classify the articles into those which they believe worth careful reading and those they believe they should only skim.
11. Scan the pages of three recent magazines to find the number of times one of these people is mentioned:

Hoover, Byrd, Millikan, the Prince of Wales, and Mussolini.

12. Suggest exercises children of the fifth and sixth grades ought to do in order to show them the difference between reading carefully, skimming for the gist of the article, and scanning for particular topics.
13. Select from ten good readers and other sources exercises which are excellent for building vocabulary. Compare the results of the use of such with vocabulary development through reading much interesting material. Could you plan an informal experiment with two groups of children which would give some evidence as to the relative worth of these methods?
14. Is there any danger in an excess of vocabulary exercises?

CHAPTER X

GUIDING THE LEARNING OF NUMBER RELATIONSHIPS

Learning number as a tool — Seeing number situations in school — Situations involving number relationships — Procedure in teaching number processes — Practice and practice material — Sequence in learning processes — The use of diagnosis — Diagnosis reveals much — Accuracy and speed — Some teaching points — Teach only meaningful processes — Induction in relation to understanding number processes — Debated points.

Summary — Suggestions for thought and discussion.

Learning number as a tool. With children, the learning of number should be kept in relationship to use. It is a tool which serves many of the situations arising in living. It should be learned as a tool is learned. When situations arise in which there are quantities involved, the relationships should be met. The number process thus used should be noted. As it proves useful it should be learned, so that it will be available for other like situations. The learning sequence is the same as that given in other chapters for the mastery of any skill or habit. (1) Meet the process in a real situation in which the learner feels the need for the process with which to continue his line of activity. (2) Learn the process by the use of as much repetition as is necessary to fix it. (3) Use it in further vital situations.

Seeing number situations in school. The difficulty which confronts many teachers in following this se-

quence is the failure to find the real situations calling for the processes of number. This is due, in part, to the fact that the teachers, themselves, learned number apart from the use of it. To many it was a form the use of which they learned much later in life. In many instances the process had to be learned anew when the situation arose calling for its use.

Another reason for failure to see number situations is the fact that many teachers do not think of school as a place where children live together, but as a place where children recite lessons and do assigned tasks. Many teachers have been trying to teach counting in a formal way, but have failed to see the counting situations in the classroom. They have gone ahead after school counting out the sheets of paper to be passed in the morning, and have attended to the passing, never realizing that they were thus robbing the children of real learning in relation to use. Similarly, if there were any real measuring to be done in the classroom the teacher has done it to be sure that the measuring was accurate.

A third reason why teachers have failed to see the number situations in school is the fact that they have conceived of school as a very dead routine procedure. They cannot picture activities in the classroom because such activities could not be carried on with every child doing the same thing at the same time. A school procedure where children set up definite objectives, plan how to attain them, engage in various enterprises designed to attain these objectives, carry

these enterprises through to completion, and consider the worth of their efforts is to many teachers unthinkable.

Situations involving number relationships. The fact that a teacher and a number of children are living together in this schoolroom involves number situations. The realities of such a situation must be met. There are individual possessions, and there are common possessions and materials. Living together upon a common basis means sharing upon an equal basis. Numbers of children, numbers of books, pencils, crayons, rulers, wraps, lockers, and other materials used must be looked after. Time must be accounted for. Responsibility for the use of time is a factor in efficient living. If the class is living fully it is living into the community about it, and this involves distances, directions, amounts, quantities, numbers — far more of such situations than one might at first think. Activities involving the use of materials involve amounts, division of amounts among the children concerned, costs, waste, losses, and results, all of which mean quantitative situations.

The following listing may suggest some of the kinds of classroom situations involving number:

Counting the children in the room.
Dividing the children into a number of groups for certain phases of work.
Counting the materials preparatory to distribution.
Planning projects relative to size, materials, cost, and time.
Measuring liquids.

Finding how many cups of milk there are in a quart.
Telling time.
Using numbers to designate rooms, streets, pages in a book, or chapters in a book.
Paying car fare in going upon an excursion.
Ages of members of the class.
Number of people in each child's family.
Number of people living in the block where each child lives.
Amount of food eaten by the class, such as number of eggs for breakfast, or cups of milk.
Cost of keeping a pet rabbit in school.
Cost of books for the class at the beginning of school.
Keeping health records in weight and height.
Keeping weather records in temperature and barometric measures.
Keeping scores in games.
Charting class test-scores in graphic form.
Making maps to scale.
Making a topographical map of the environment, indicating contour lines.
Making an inventory of school equipment.
Ordering the mid-morning lunch, and checking up the money.
Adding in the cafeteria in cases where luncheon is bought in such a place.
Using money in buying for class needs.
Finding the cost of materials in making jelly.
Making ice cream, and ordering the right amounts of materials.
Using a recipe for quantity cooking, as is the case in planning for a party.
Using the scale of miles for measuring distances on a map.
Estimating distances on a globe, where latitude and longitude are given.
Comparing data as to area, population, and products of countries studied.

Learning to think quantities in geography in terms of points of reference, as so many times the width of a known river, so many times the height of Washington Monument, so many times the size of the local community, and so many times as large as the State in which the child lives.

Making graphs of recent data to substitute for the graphs given in the text in geography.

Estimating the amount of food one should eat in terms of calories and individual weight.

Making budgets of clothing for a year.

A wise teacher is very careful to think of each situation in terms of the quantities involved, and to judge whether the children have the necessary number processes mastered to enable them to meet the situations.

Procedure in teaching number processes. Having met a situation calling for a number process, what is the procedure in teaching? Often to halt the activity until the process is mastered may break the continuity of work and defeat some worthy ends. Sometimes it is best for the teacher to supply the needed technique in order that the activity may go on. However, in any well-regulated program of class living, there should be in the plans provision for noting any such situation when it arises. The process supplied by the teacher proved useful, and therefore, it must be taken up by the children for further consideration at the time allotted for learning needed techniques. They should come to regard it as their business to be alert for those processes which prove useful. They should feel a

responsibility for learning them. Such an atmosphere will not come immediately with children who have been accustomed to a school procedure where all work is dictated. It will come in time if the teacher is sincere in her effort to conduct the work upon a basis of living and responsibility in living.

The second step, then, in learning the skill or process which has been met in the course of carrying on the enterprises of the class is to go about learning it just as soon as there is drill time available. The principles of drill given in Chapter IV are here applicable, and do not need to be repeated. Some comments upon the conduct of such work may be fitting.

The two great laws of learning are repetition, or exercise, and effect. Of these, modern psychologists tell us that effect is the more potent. Much repetition does not produce learning so well as does satisfaction in such repetition as is given. To increase the learning, increase the satisfaction. One way to increase satisfaction is to have the child engaged in practice of a thing which is essential to his enterprises. Then he has a reason for mastering the skill, and is glad when mastery is obtained because then he can go ahead with the thing in hand which has been calling for it. This explains why there is economy in learning where the child is interested in the results.

Practice and practice material. Some have incorrectly argued from this that every problem in arithmetic, which the child is permitted to work, must be one in which the answer is necessary before he can go

ahead with his enterprise. Children have a little more foresight than this. A boy will get out and practice throwing balls before the game begins. He can see that he lacks sufficient skill and, therefore, needs practice aside from the practice he gets in the game itself. Similarly, children in school can, in the things they are doing, see that ability to add the column correctly and quickly is an advantage and, therefore, will want to practice such addition apart from the time when they are using it in their activities.

Therefore, it seems natural to use practice material for mastery of the number processes which are proving useful in the things the class are doing. We do not need a utility motive for every problem worked. Finding the amount of water which fell on a given area, after the rain gauge has indicated the depth of the rainfall, may be of concern to a group of children. This will involve the process of finding volume, and, if the amount of water is turned into familiar measures, there will be the necessity of knowing how to change cubic inches into gallons. Going through these two processes just once will get the results immediately demanded in what they are doing, but one performance of each operation is inadequate to fix the process. Practice material is needed. To say that there must be a real rainfall for every problem practiced is foolishness.

It will be seen, then, that much practice material is needed. To ask a busy teacher to prepare all of this as needed is asking too much of her. Further, in the

pressure of work, she may not have time to think through the material she prepares carefully enough to avoid any possible difficulties which easily could slip in and thus defeat the end in view. Prepared practice material seems best. Many new texts are being prepared with just such method in mind. The problems are carefully graded in difficulty. Often they are accompanied by test material by which the individual child may find for himself whether or not he is master of the process after he has done the practice exercises.

After the process is thus learned through practice material it is important that the teacher be alert for occasions which will be arising when the process should again come into use. Some teachers are inclined to overlook such situations. They seem not to have a number sensitivity keyed to the child's ability and point of view. If a teacher fails thus to recognize the new situation she may allow the children to form slovenly habits, to be careless in meeting quantitative situations with efficiency, and to learn to be indifferent in using what ability they have in meeting situations. If a teacher has this sensitivity she will be able to see to it that her children have vital review. Review of a process once mastered is necessary if one would keep his performance up to the efficiency level. Some teachers merely impose reviews without in any way enlisting the children's efforts. Such review is often wasteful because the practice is not demanding fullness of attention.

Sequence in learning processes. This method of learning a process in relationship to use raises a difficulty as to sequence. Some teachers will be concerned lest things come up in any order, and thus destroy a gradation of difficulty in the sequence. The older arithmetic texts placed an implicit faith in a fixed sequence which is no longer accepted by modern authorities. In fact, some things once taught separately, and in a certain order, are now to be taught together if we follow the advice of those who seem competent to judge. Addition and subtraction facts are to be taught together. So are multiplication and division facts. Further than this some things, once reserved until advanced grades, are now begun much earlier.

Then, too, we are told that one does not need to learn all about a process when he learns something about it. It would not be a violation of modern theory to have a little of fractions before one has mastered the four fundamental processes. It may be further added that the teacher is in a position of responsibility where she can judge whether a process coming up in a class discussion is one which the children can profitably attempt to learn. Sometimes the needed process is merely to be supplied by the teacher in order that the class enterprise go on. This is in harmony with the practice of having the teacher take down the children's compositions until the children have enough knowledge of writing and spelling to do the writing themselves. Such a method is intended to prevent holding up one sort of learning while waiting for another which is related.

Children seem to be more alike than different. Programs of learning number processes in relation to using them will, if carefully followed in line with children's real interests, be very likely to develop with a great deal of consistency in sequence because the things children tend to do have a considerable amount of uniformity. What is commonly called logical sequence is a sequence arrived at *after* processes have been mastered.

The use of diagnosis. It has been suggested that the teacher should use good judgment in determining which of the processes, arising in the course of full living, the children should attempt to master. This means that she should know quite definitely the children's abilities. Such knowledge can come in considerable part from the use of diagnostic tests. By their use she can know specifically just where the child's difficulty lies. Recent test and practice materials have been made with this definite purpose in view. Further than this the child, himself, can know his own difficulties as revealed by the test and practice material, and good work in the classroom demands just such personal knowledge.

Group living of the kind implied in this book will develop group consciousness. This consciousness will lead each child to want to know what he contributes to the group life, and where he fails in this respect. Proper class planning will lead each to recognize the leaders in the various activities. Diagnostic tests will add to this knowledge. A right spirit in the class-

room will lead the class to know the ones who need help on specific processes, and to plan the class time so that needed drill will be provided. General drill, without reference to specific needs, is worse than poor. It may result in dislike for the processes being practiced. It may result in poor practice and, therefore, undesirable learning. The class spirit should recognize that all practice is specific, that responsibility for time demands results from practice, and that these results be found out. Practice should end in knowledge of degree of success.

Diagnosis reveals much. Careful diagnosis and search for causes may reveal that poor performance in number processes is not entirely due to inability to perform the process. Other contributing causes may be found to be poor eyes, resulting in seeing the numbers incorrectly; poorly made figures or poorly spaced figures, resulting in inaccuracies which should have been avoided; failure of the attention span to hold through the process, as found in long-column addition; lack of mastery of the basic combinations; poor writing surface upon which the work is done, thus making the work illegible; and lack of neatness, making for indefiniteness in the work. Great care should be taken, when teaching children the form of figures, that they not only learn the form correctly, but that they learn the correct sequence of strokes in writing each figure. Crowding together of figures, too, should be avoided by attention to spacing.

Mastery of the combinations means learning each

one so that it is instantly known when called alone. Learning addition or multiplication facts in a table does not guarantee thus making each immediately available. Some children learn some of the combinations, and then use them as a basis of determining the others when needed. Thus 9 and 8 are often found by adding 1 to 8 and 8. Great care should be taken that all combinations are really learned. Speed drills are helpful in this particular.

Accuracy and speed. When we consider the relative value of speed and accuracy we realize that too much time is being put upon speed in terms of its worth. Further, speed, without accuracy, is of little value. Real speed of value can come only after accuracy has been attained.

There are several things which prevent speed. Some of these can be avoided. One who counts upon his fingers is, of necessity, slower than one who knows the combinations. When children see this, they will better see the value of definite knowledge. Another difficulty is that already mentioned — children who arrive at the hard combinations by counting from known easy ones are delayed in their work.

Saying too much in the process of doing is a hindrance. In column addition some children are allowed to say "7 and 8 are fifteen, and 5 are twenty, and 6 are twenty-six," and so on, whereas economy requires that they look at 7, say it, look at 8, say "fifteen," look at 5, say "twenty," and so on. Verbosity must be prevented. Having a child add aloud will

sometimes reveal the difficulty. Some children, too, form the habit of writing partial sums and thus delay the process; they should learn to hold these in mind.

Some teaching points. If a teacher attempts to teach number in relation to uses arising in the group living, she will use the test-and-practice material for teaching the processes found valuable. Such procedure calls for her keeping some essential points in teaching in mind. Children should be taught to check their work by approved methods. Column addition should be added up, and checked by adding down. Similarly, other definite checks should be taught so that a child will come to understand that he has not completed the work until he has checked it.

Time in copying problems should be saved. Use prepared practice materials. These materials can be used again and again if we follow the suggestions of those who have prepared them. Have children write answers upon a sheet of paper, placed just below the problems. By folding the paper from time to time the paper can be put so that it is just under the problem in every case. Such a procedure will save eye-strain in copying the problem, save time, avoid errors in copying, and teach children expedition in their work.

Be careful not to introduce zero difficulties at the beginning of the learning of a process. Those who prepare practice materials do not endorse the use of the process sign of plus, minus, multiply or divide. The child comes to lean upon them and not think what

he is doing. Crutches of this and other kinds should be avoided. Do not teach a thing which will later have to be unlearned. Forms should be learned as they are used. It is a good thing to teach children to estimate the answers before performing the operation. This serves as a check upon the result and keeps them thinking as to the meaning of what is being done.

Closely akin to this is the practice of teaching children to think quantity in terms of some known point of reference. Children living in New York City can easily use Woolworth Tower as a point of reference for height. Its height can easily be learned, and then mountain heights can be in terms of this known height. Similarly, widths of streams, areas, populations, and other quantities being considered should be thought of in terms of known data in experience.

Other points emphasized by experts in the field of arithmetic include the importance of teaching addition in the higher decades, not assuming that learning the primary decades guarantees the higher; avoiding the use of unusual fractions, such as thirteenths; avoiding trivial problems for practice material; avoiding problems that are based upon untrue data; and being careful to use language that is understood by the children in stating a problem for practice purposes. Of course, the problems giving rise to the learning of the processes will be meaningful if number is kept in relationship to use. It must be remembered that number processes can be learned in advance of meaning, but that such learning may serve to retard the

learning of its use. Meanings in use should precede processes.

Teach only meaningful processes. The proposal that the learning of number processes be kept continuously in close relationship to the situations arising in the group living will lead to the omission of some processes once taught in arithmetic. This omission is in harmony with the surveys recently made to determine what uses are made of arithmetic processes. While these surveys have been almost entirely surveys of adult use of number, they have been so conclusive in their recommendation that many once favored processes in the text should be omitted that teachers in elementary schools find confirmation of their tendencies to keep the learning of processes in relationship to use.

Of course, the degree of richness of the work governs largely the uses which arise. If a teacher in the course of the work is not finding number situations arising and demanding the mastery of processes, she needs first to ask if the work is vital and rich enough to bring much need for number. Too often is this the case. If, however, children are actively living into the life about them and doing it with efficiency, such dearth of number situations will scarcely exist.

Induction in relation to understanding number processes. There has been in the past much discussion about the responsibility of the teacher to teach the underlying reason for a process when she was teaching the process. Some have argued that it was

an insult to intelligence to ask a child to use a process. the underlying reasons for which he does not understand. Arithmetic was formerly organized upon the deductive plan of teaching. Deduction implies the use of principles. One cannot truly use principles if they are not understood. The understanding of a principle comes through acquaintance with it in action. We teach a child how to carry in column addition by showing him again and again just how to perform the operation. After we have shown him exactly what to do and have done this a number of times, we give him an opportunity to try adding and carrying, being sure that the problem is simple enough to insure success. The child goes ahead adding many problems where carrying is involved. Some children never go beyond this stage of learning the process. This is enough to meet the addition situations of everyday life.

If one has no curiosity about the whys of life he continues to live upon this process-performance level. However, a time will come for many of the children when in carrying they will begin to compare what they are doing at this time with what they did in another problem. This recalling and comparing goes on with the individual child as his curiosity impels him. In time, he pulls out the common factors of carrying so that he identifies them. He sees that in the right-hand column the number he is carrying is ten. He adds it with the other tens. Similarly, he sees that in the next column he is carrying a hundred and putting it with the column of hundreds. When he has

contemplated these facts sufficiently, he comes to the point where he *sees* the law of carrying. He has then made the induction. It is his own.

Processes in arithmetic then are to be taught as processes where the teacher shows the child exactly what to do. The child is not troubled with the underlying reason for the process until he is ready for it. This readiness usually does not come until after mastery of the process. When the child begins to ask why, and when he begins to note common factors, the teacher may help him to pull out all the common factors. She cannot, however, *see* the law for him. This is his own thinking. *He* must do it, or it is not done for him. This sequence seems to apply throughout in the teaching of processes in arithmetic.

Debated points. There are a number of debated points in the teaching of arithmetic processes. The recent tendency has been to put them to the test. Several of these points are being so studied. The question as to whether to use the additive or take-away method in subtraction is a question in point. Data have been gathered and conclusions reached, but sometimes data have been conflicting. At a recent meeting of a national research organization one member reported a study, and gave the findings with a great deal of assurance that his conclusions were right, as to the best procedure in this particular question in the teaching of arithmetic. He was followed by a speaker who stated that he and others had been studying the same question, and that their findings were just

the opposite. In the midst of such conflict of opinion the classroom teacher can only follow the best available advice as to which procedure to use, and wait for further findings. In the meantime, common sense would advise that she use one procedure, and not attempt to teach both to a given group of children.

Summary. Number is to be learned by children as a tool serving their needs. These needs will arise in the course of daily living. The teacher needs to cultivate in herself and in the children a sensitivity to these number situations. When a need arises the teacher should help meet it by providing the process and later teach the children to fix it by the proper use of drill materials.

Processes should be taught by the principles underlying drill. Principles underlying processes should be developed inductively as children are ready for them.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. List number situations your children are meeting outside of school.
2. Consult *The World Almanac* for data about the imports and exports of the United States. Compare these data with those given in graphic form in your text in geography. Make new graphs showing the recent data.
3. List the practice materials available for teaching the four fundamentals. Make a collection of these. Compare them relative to cost, durability, convenience in handling, and gradation of difficulty.
4. What proportion of the school time should be devoted to the use of number practice materials?
5. List the steps in addition with carrying, short division,

long division, multiplication with a two place multiplier, addition and subtraction of fractions.

6. When does a child understand why he inverts the divisor and multiplies in division of fractions? When should the reason be discussed in class?
7. When should decimals be taught?
8. Should long division be taught in the fourth grade?
9. What standard arithmetic tests are diagnostic? What should be done with the data obtained in the test?
10. List crutches in number work that should not be taught.
11. How much farther does a liner travel in crossing the Atlantic ocean in winter than in summer?
12. Why did airplane men try to get a flying route from Europe to America by the North Pole? How much shorter would the route be?
13. When can children be taught to make linear graphs? Circle graphs?
14. Which are the most difficult addition combinations?
15. After you have taught "2 + 3" do you need to teach "3 + 2?"
16. Do you need to teach zero as an element in teaching multiplication facts?
17. Make a graph showing the nationality of the parents of children in your room.
18. Select a child in the class who needs to learn to do column addition. Keep a chart showing his improvement through the use of practice material.
19. Make graphic representation showing the results of two diagnostic tests in arithmetic given to a single class, where the tests are designed to show progress in an interval of time.

CHAPTER XI

HELPING CHILDREN TO LIKE MUSIC, LITERATURE, AND ART

The heritage of music, literature, and art — Task of the school in teaching children to like these — Familiarity as a factor in learning and enjoying the æsthetic interpretations of life — Association with those who like the beautiful — Acquaintance with the background of details used by the artist — Place of technique in learning to enjoy art products — The function of creative work — Creative work in the schoolroom — Memorizing poetry — The place of biographical material.

Summary — Suggestions for thought and discussion.

The heritage of music, literature, and art. The experiences of man throughout the ages have been much alike. Play, laughter, hunger, and sorrow have been common in the lives of all people. Comfort in mother love, relief from pain, delight in waterfalls, awe in the violent electric storm, devotion to one's task, weariness from toil, and joy in the new day have been the experiences of those who have lived in this world. Many of these experiences are so vital to us that when such a one occurs there arises the impulse to want to share it with another. When one sees a beautiful sunrise, he often has the wish that he could paint it or photograph it that he might carry it with him to show to others.

Fortunately, through the ages there have been, here and there, individuals who not only feel deeply in meeting the situations of life, but who have had the

ability to put their interpretation of experience into some form which has permanence so that it can be shared by others. Such people we call artists. One of them goes to a musical instrument and strikes the strings in such a way as to tell us what he felt in the situation. Another will take a canvas and brush and, by a few deft strokes, picture the experience to us as he saw and felt it. So there has accumulated through the ages a wealth of treasures in music, literature, and art which constitute a comprehensive interpretation of life in its many phases.

This storehouse is the rightful inheritance of each individual. His it is to live in this world and meet as best he can the many situations that confront him. For each situation he has his own interpretation. Much satisfaction can come to him if he can know how others have interpreted similar experiences. So he turns to music, or to literature, or to art. If he knows what the storehouse of art holds he can go to it in times of joy or stress and find a kindred interpretation of life. Friendship with the Raphaels, Davids, Wagners, and Shakespeares of the ages is the rightful possession of every one who lives.

The task of the school in teaching children to like music, literature, and art. It is the province of the school to bring children into their inheritance. We have already seen that one task of the school is to guide the experiences of children so that they may be many, rich, varied, and increasingly more valuable in promoting growth. These experiences should include

many with the physical world, many with the effort of people to live together in some form of social organization, and many with the work of the world in providing for man's comfort in living.

A second important task of the school is that of teaching children to master the tools of experience, such as language, reading, writing, spelling, and number. Such mastery is necessary if one would be increasingly able to enter into new and farther-reaching experiences.

The third task of the school is to help the child to learn to interpret his experiences. Such interpretation depends, in part, upon understanding. This understanding is greatly furthered by knowledge of the facts involved. Interpretation is partly a matter of feeling. The way we feel about a matter is influenced by awareness of how others feel about it or a similar situation. Interpretations of a fine kind are to be found in poetry, pictures, songs, stories, and statuary which have lasted through the years and have been found helpful because they typify life. The school's third large task, then, is to help the child to learn to know these treasures. Acquaintance with them should come in relation to the experiences they interpret.

Familiarity as a factor in learning and enjoying the æsthetic interpretations of life. We tend to like the familiar. Things of one's childhood, and the commonplaces of everyday living have an influence which is reassuring in times of strange or trying experiences. We seem better able to organize ourselves in the pres-

ence of things we have known with satisfaction before. The basic principle, then, in teaching children to like the beautiful is to put them in contact with it. Much acquaintance with it is essential. This means that there must be much contact with music, literature, and art in the schoolroom. There must be much time and opportunity to enjoy it. For this reason, it is highly desirable that the teacher make it a practice to gather, as she can, numerous and varied selections from the art fields. Some newspapers and magazines carry, as a regular practice, selections from worthy poets and copies of pictures from artists of note. Excellent photographs of great cathedrals and statues are now easily available. Inexpensive copies and reprints can be obtained. The price of books is no longer prohibitive.

These collections should not all be present in the classroom at one time, but should be selectively used. As the Christmas season draws near Madonna pictures may be available; Christmas carols may be sung; "How the Chimes Rang" may be enjoyed. When the process of making grain into flour and making it into bread has been studied and understood, children are ready to enjoy the spirit of "The Miller of the Dee." The study of forging of iron makes meaningful "The Village Blacksmith," and "The Anvil Chorus." Acquaintance with the processes of spinning and weaving make children better able to grasp the significance of Mendelssohn's "Spinning Song," Eliot's "The Weaver of Raveloe," or Mauve's "Gossip." The

teacher should make it a practice to see that each worthy experience of the class is accompanied or followed by such fine æsthetic interpretation as can be made available.

The art treasures used in the schoolroom should vary from time to time as interests vary, but there should be the continuous practice of always having some present at all times. The class library furthers this principle. The library should be a collection of a variety of books, including many stories which enrich and interpret childhood. The story hour should be a time of getting acquainted with this wealth of material.

The songs that are sung should be selected with reference to the plan to acquaint children with the child's treasury of song. The bulletin board in its varying materials can embody this same principle of putting children into contact with the art treasures of the world. The pictures on the wall should serve this same purpose. The folk dances learned, the folk tales dramatized, the poetry learned, should all contribute to the work of the school of *exposing the children to the beautiful under conditions that are so satisfying that they will want more.*

Association with those who like the beautiful. The gregarious tendencies in children and sensitivity to social approval tend to make them like the things liked by their associates. The more a school helps children, therefore, to like the beautiful, the more they are associating with those who like such, and this, in turn, furthers such liking. Obviously, the one in

the classroom who is most potent in furthering enjoyment of the beautiful in art is the teacher. It follows that the teacher, herself, must be one who finds genuine satisfaction in art treasures. Children are sensitive to genuineness in one's liking. If the teacher is merely *presenting* a poem, or picture, or song to the children, instead of *enjoying* it with them, the children easily sense this absence of genuine liking. This means that the teacher must be one who can and does enter into the life of childhood. She must know and enjoy the stories, songs, poems, and pictures that appeal to children. Wisdom would forbid her attempting to lead the children into liking anything which she did not herself like. It would insist that she continuously acquaint herself with the art treasures which appeal to childhood, and strive to find the appeal.

The use of these treasures in the classroom should be informal, natural, and genuine. Appreciation comes as the fitness of the picture or poem is felt. Such feeling depends, in part, upon understandings. If the rhythm of the actual life process is known, then the like rhythm in the song or poem is recognized. If the essential elements of the process are known, their embodiment in the art product will be seen. As the life experience, then, takes on meaning, the artistic interpretation of it is appreciated. Merely to put on the chalk-tray or bulletin board a copy of "The Sower," or "The Gleaners," may be adequate if children have studied the processes of raising grain before modern machinery was invented. The reading of

"The First Snowfall," when the first snow of the season is coming down, may be an excellent way of getting children to realize that others have enjoyed snowstorms. Tennyson's "The Oak" may best convey to children the age-long delight of some people in strong sturdy trees.

Each child should come to feel that it is his privilege and pleasure to bring to the class any picture, poem, or story that he likes and that he thinks will further the enjoyment of others. Such a spirit of sharing should, in time, teach children to rely upon music, literature, and art as sources to which to go to find adequate expression of their feelings in the many experiences they are having.

Acquaintance with the background of details used by the artist. When we examine the work of an artist which is an interpretation of an experience of life, we find he has given the interpretation embodiment. It has a setting made up of the details characteristic of such experiences. These details are necessary in making us able to identify our experience with the one he is interpreting. Gray's "Elegy" has the lowing herds and the distant church steeple. Alma Tadema's "Reading from Homer" uses costumes characteristic of the people of such a situation. Joyce Kilmer's "Trees" talks about trees that seem real.

If one comes into contact with a work of art which is embodied in details with which he is not familiar, his appreciation of it is greatly limited. If a child has had no experience with sheep, or with peasants working in

a field of wheat, he is scarcely ready to appreciate the "Shepherd Psalm," or "The Angelus." To use the art product as a reason for learning these details would rob the æsthetic material of its great value in interpretation of life. Teachers once made this mistake. "Hiawatha" was once used as material for a primer to teach reading and the details of Indian life. Professor John Dewey long ago protested.[1] As he pointed out, these æsthetic materials are to be used as the finishing touch, the beautiful interpretation of a life experience that has been worth studying. The understanding of the details is necessary to fullness of appreciation but these details should be learned first, and they should be learned because they are worthy in themselves as aspects of life. Then the artistic interpretation may follow.

The place of technique in learning to enjoy art products. What is the place of technique in the teaching of art? The artist uses it as a means to put his message into form. The one who enjoys the product needs enough of the technique to get the message. Some teachers in the past have made the mistake of assuming that technique served the same purpose to all, regardless of whether they were creators, consumers, or teachers of art products. One cannot go very far in the enjoyment of an art field without some knowledge of technique, but his enjoyment may be greatly curtailed if it is used as an excuse for learning a great amount of technique for which he sees little

[1] Dewey, John: *School and Society*, vol. VIII, pp. 159–60.

need. The underlying principle seems to be *to keep technique as a means to further enjoyment — not as an end in itself.*

Children should learn to read music when and as they see that they need it in order to learn more music. They will get the meaning of rhythm if they see it as conveying the spirit of the poem or song. They will then want to learn how the rhythm is expressed. When they try to picture a scene in which there is a building or a receding road, they will find the need of understanding the principles guiding the picturing of parallel lines. If they attempt to express a sentiment in words that are so chosen as to express the sentiment, they will want to know how to express movement and rhythm. The effort to get and to understand more beautiful things in the art world, and the effort to give expression to one's own beautiful ideas so that others will get the beauty one feels, will cause one to welcome help in learning technique. The learning of the techniques, though, should always follow, not precede, the feeling of need for them. The one who is preparing to be a musician or an artist may devote so much time to the mastery of technique that at times it seems to be the end, but a little thought will show that it is only a means that looms very large in the long preparation for the chosen vocation.

There was once a time when it was supposed that a child could not learn to read until he had first learned the alphabet, then the simple syllables, and then the words. Similarly, there was a time when a person was

not supposed to be able to do a piece of woodwork until he had made samples of all the joints, or to make a garment until he had made a sampler of all the stitches. So music and art were similarly thought to demand a long preliminary period of mastering the scales or of drawing lines before one could have anything to do with the art products themselves.

In each of these fields there has come a change in method. Children are reading to-day before they know the letters so that they can call them accurately. Children are sewing before they know all the stitches, or working in wood construction before they have mastered all kinds of joint structures. They are learning the techniques when and as they need them. The farther one goes in one of these art subjects the more technique he needs, but he should not be given it in advance of his need.

The function of creative work. As has been suggested in the last paragraph, there is a place for creative work in the school. This fact has been so put before teachers in recent years that there is danger of teachers' feeling a compulsion in securing creative work to the extent that they will use wrong methods, or even exploit children in the effort to get such results. The creative impulse seems to follow rich experiences, rather than precede or even accompany them. After one has lived through a situation that has brought him much satisfaction, he may feel the desire to record the joy of it in some way. The more beautiful the experience has been the more will he want his expression

about it to be beautiful. He then seeks for a medium that will convey his feelings. Through this medium he attempts to express what he feels. If he is not too timid, he will share the result with those whom he regards as sympathetic, but he shrinks from showing it to unfriendly eyes. Compulsion on the part of one who tried to exercise authority would probably prevent him from even expressing the feelings he has. To force him to give his product to unfriendly persons would be cruelty itself.

Such principles concerning creative effort hold in living together in the school, as well as in any other living situation. Creative work should be an expression of inward feeling. Deep worthy feeling comes only with worthy experiences in which one is really concerned. We then cannot expect the schoolroom to be productive of creative products unless there is in the school some experience of real worth. A program of routinized drill upon mere forms will not give much feeling. The children must be doing many things that are to them extremely worthy. There must be room enough for spontaneity and initiative for the experience to be truly theirs.

There should be no sense of constraint in attempting to express the feelings aroused. Children should not be put into situations where they feel they must write poetry, or compose a song. Such situations make for feelings which are foreign to the expression of the beautiful. The child, then, misses the joy in beauty.

Creative work in the schoolroom. The schoolroom

atmosphere should be such as to appreciate the things the individuals contribute to the group life, and there should be provision in the schedule for time to enjoy these individual contributions. The morning assembly may well be a time when children enjoy such contributions. The school paper may become a medium for such contribution and sharing. If children are learning that individual good is the common good, and that individual joys should be the common concern, then will there be a spirit of appreciation of the efforts of individuals to give expression to beautiful ideas. Then will a child's poem which he writes, following a class excursion, be a source of interest to all. Likewise, an individual's description of a landscape he has seen will be welcomed by all.

As has already been indicated, the teaching of the necessary techniques needed in creative work should accompany the effort, and follow the feeling of need — not precede them. Techniques should be regarded by the children as a means in furthering their undertakings. Such a point of view will make for economy in learning, as well as for joy in the mastery of the processes involved.

It should not be inferred by what has been said that children's creative efforts should be limited to the fields of poetry, music, and art. In most of the things that children do there should be encouragement for them to be creative. To be creative means for them to put their own interpretation, their own feelings into the matter in hand. The self should be involved. And

this should be true in all that one does. Whether working in wood or cloth, whether reading a book or discussing a disputed point, whether trying to meet a challenging question, in all that one does he should feel free to be his own self and to give expression to that self. Only thus can he grow and become that which is possible within him.

The creative act seems to consist of: (*a*) a rich, appealing experience; (*b*) the development of an emotional attitude toward it; (*c*) the awakening of a desire to give expression to this feeling; and (*d*) the use of available techniques in giving the feeling some form that can be shared with others.

Memorizing poetry. If one follows the spirit of teaching the art products which has been presented here, he can hardly subscribe to a program of compulsion in memorizing poetry. Yet it is rather genuinely agreed that one who can readily quote the words of great writers is indeed fortunate. How can we get such knowledge of literature and avoid the undesirable effects of forced memorization. Forced memorization makes it the end. Can it be a means or a by-product of some worthy enterprises? As a rule children memorize readily. The important thing seems to be to find ways of putting them into touch with the author's words with enough frequency for the words to become familiar.

The writer once watched a teacher and some children as they became acquainted with Joyce Kilmer's "Trees." It was near the close of a hot summer in

a school in a city. The teacher called attention to the fact that the children would soon be scattering. Many would go to the country and see trees. She told them she wanted them to enjoy the trees. She added that she had a poem which to her expressed the joy she felt in trees, and she wanted them to know the poem too. She then read it to them while they listened. Then she suggested that they might like to look at the words as the poem was read and so gave each child a copy. Again she read it slowly enough for the children to have time to get the thought. There followed a conversation about the poem. At one time the children picked out lines which described favorite trees. Sometimes they read lines which vividly described a tree. Then there was the reading of the lines which expressed the sounds trees make. Lines were read which expressed the motions trees make as they move in the winds. Then, at the suggestion of the teacher, several children went to the blackboard and each drew a tree described in the poem. When the pictures were done children read to each, who had drawn, the lines which they thought he was illustrating. After the period of conversation about the poem in which they thus lived with it, the teacher asked if any one could, without looking, quote any lines from the poem. Several tried and succeeded in quoting a number of lines. One child quoted all. Then there was a little effort to do better, and before the period was over many had memorized the whole poem. In no case was memorization felt as a compulsion. The keynote of the lesson was enjoyment of the poem.

There are times, if a class is living richly, when there will arise a definite purpose to memorize. Then should children be taught to take pride in the ability to memorize with expedition. There is, at present, difference of opinion as to what is the best method of memorization — the whole or the part method. There seems to be conflicting statistical evidence.[1] Some recent writers have advocated the whole method.

The place of biographical material. There was a time when it was thought that the study of a poem, or a picture, or a song involved, as a matter of course, the learning of the details of the artist's life. This was carried to such an excess as to make the art product a mere vehicle for teaching a great deal of biography which was not of particular concern to the child. Today, we are saying that only such biography should be included as is helpful in furthering the enjoyment through better understanding. If biography is a means to understanding and meaning then it should be included; otherwise it should be omitted.

Summary. The accumulated storehouse of poetry, music, and art is the rightful heritage of every child. It is the task of the school to help children to come into their inheritance through becoming acquainted with as much of this wealth of art products as can be included in a program of rich living. The underlying principle in all the effort of the school to acquaint the children with these art products should be to expose them to these under conditions that are so satisfying

[1] See Chapter IV, p. 79, footnote.

that they will continue to want more. Association with those who like the beautiful furthers such learning to like things. The teacher should be one in the schoolroom community who likes these things in a very genuine way, especially those appealing to child life.

The art product should be used as the final interpretation of a worthy experience in any of the fields of industry, or history, or geography. Acquaintance with the details used by the artist in giving this message embodiment will then further enjoyment. Technique should always be learned as a means, not an end, in the effort to teach children to like the beautiful.

Creative work should be the natural expression of a full, rich experience in the sympathetic schoolroom atmosphere. Memorization of poetry should be a by-product or a means in furthering worthy activities. Biographical material should be taught only as it furthers the learning to like the beautiful.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. What musical experiences can a first-grade child have?
2. What pictures should be hung on the wall? Where should they be hung?
3. How frequently should they be changed?
4. What shall be done with the pictures the children make?
5. What æsthetic value is there in posting several of the same study by a class?
6. Can children's work genuinely promote the art appearance of the room?
7. Of what use are reprints of the works of great artists? How large should such a reprint be to be of use for a

wall decoration? Should it be in color? What are the limitations to the use of these?

8. What educational value is there in a band in the primary grades?
9. What are the reasons why you want a phonograph in your classroom? A piano? A radio? If you could have but one which would you choose? Why?
10. Make a list of phonographic records suitable for the primary grades; for the intermediate grades.
11. When should children compose their own songs? What should precede such composition? What will you do with the songs when done?
12. What relation does such composition bear to technique?
13. Which is more valuable, the incidental enjoyment of a poem by a class or the definite teaching of a poem? Which functions more in life, ability to recite poems or ability to enjoy poetry?
14. Recall what was said in Chapter V about the creative quality of all work in the school. Relate it to the discussion of creative work in this field.
15. Explain the meaning of the statements, "The creative act means the self-becoming"; "The impulse to express an idea in a beautiful way follows, not precedes a very rich experience"; "In all creative work the self is concerned"; "No class work should be conducted so as to make a child feel he must write an original poem"; "In creative work the teacher can be too prominent."
16. Collect all the material you can find about the story of the Holy Grail. List all the pictures, music, and literature you can find where it is the theme. Do the same about each of the following: The mill, the blacksmith, the potter, the making of records, the sheep, and the harvester.
17. Professor Dewey has suggested that the study of a significant unit of human experience may well be followed by contact with an æsthetic interpretation of such experiences. Find poems, songs, or pictures of

artistic merit that can be so used in connection with the study of the process of spinning, the invention of printing, the copying of a book by a scribe, the planting and harvesting of wheat, the work of lumbering, and ship building. What will you do with these selections when you have found them?

18. Is there danger that school exhibits will exploit children?
19. If the children are preparing a program for mothers, what dangers will arise if they include creative work? Should it be included?

CHAPTER XII

THE TEACHER'S PART IN THE EDUCATIVE PROCESS

The work of teaching — Knowing the physical world — Knowing the social world — Knowing the world of work — Growth as an essential characteristic of the teacher — The teacher's responsibility for planning her work — Written plans — Use of the plan in teaching — Nature and value of the plan — Need for system in keeping data and materials available — Provision for professional growth. Summary — Suggestions for thought and discussion.

The work of teaching. To be a teacher means more than to be one who is earning a living. It means more than to be a school keeper. It means more than to be a hearer of lessons. It means living with children. It means influencing very largely their habits of thinking and doing. It means the possibility of helping children to grow into active, efficient boys and girls with a fine outlook upon life.

Teachers are human beings who differ according to the laws of variation. There are some factors desirable in their personalities which seem important to the achievement of results. Teaching calls for a keen, alert interest in those aspects of life which particularly appeal to children. Among the phases of life are the processes of the physical world, the processes of the social world, and the processes of the world of work.

Knowing the physical world. Too many people have a notion that the physical world is static. "The everlasting hills," and, "as eternal as the rocks on the

mountain-top," are expressions commonly accepted as literally descriptive. Yet these very rocks and mountains are continuously undergoing disintegration. Erosion, weathering, winds, storms, cold, and heat are regularly attacking them, and in time their form is changed. To observe and understand these processes at work in changing the character of the earth's surface means that the one who does so has a type of interest which is valuable for work with children. To such a one clay beds, limestone, sandy beaches, and stratified rock have a challenge, for the understanding of them gives a key for explaining some conditions of living.

Then there are the life processes in the plant and animal world. The work of the bee, the organization of ant groups, and the life cycle of a butterfly, are challenging to children if they can but be led into an understanding of these processes. The teacher who knows something of what is occurring in animal life, who knows where the humming bird is nesting, who can recognize the calls of birds, who can find the first flowers of spring, who can show where the squirrel is hoarding his nuts for winter, or who can find the frog spawn of early spring, can do much in leading children into an interest in nature's life processes.

To be familiar with thermometers, barometers, rain gauges, instruments for measuring altitudes and winds, and the signals and maps of the weather bureau, means a teacher who has something to offer the boys of to-day who are following the achievements in the

field of aviation, especially as these are influenced by the weather. In fact, if a teacher delights in hiking, camping, experimenting in plant and animal life, and gardening and collecting, he has a welcome in the realm of childhood and youth.

Knowing the social world. The ways in which people live, the differences in their manners and customs, their houses and dress, and their foods and amusements must be of interest to one who would help children to understand people. The differences are not to be singled out as peculiarities, but as variants in the solution of common problems. These problems of living center around the need of all people for food, clothing, shelter, home life, protection of life and personal possessions, play, freedom to worship, and ideals. The various peoples of the world have achieved a solution for each of these problems of need. The solution is to be understood, in part, by acquaintance with their conditions of living. Ideals and customs reflect, in a measure, the environment.

To be one who is interested in people and who can, in a measure, interpret the conditions which have influenced people, is to be one who has a characteristic much to be desired in a teacher. The forms of social life are the expressions of the coöperative effort of people to find means of meeting the needs of living. As children learn how the home community, through local government, coöperates in the effort to secure a supply of pure water or to dispose of refuse, and as they compare these efforts with those of other

communities present and past, they gradually can sense the problems of interdependence involved in interpreting manners and customs of a people.

A teacher who is thus able to guide the interests and activities of children should be one who likes people and group life. To enjoy being with people, to like the give and take of community action, and to be interested in individuals are traits which are closely akin to the qualities needed for sympathetic understanding of children. A teacher can well afford to cultivate these traits. Ability to lead a troop of Boy Scouts, or Camp Fire Girls, is a genuine asset. Leadership in other types of club activity is, likewise, valuable. Children come to an age when club organization is especially appealing. At such a time there is much opportunity for teaching some of the primary factors which underlie all efforts at coöperative living. The teacher who can successfully guide this interest has excellent teaching opportunity.

Knowing the world of work. The field of mechanical achievement is, likewise, alluring. In this day of automobiles, motor boats, radios, and airplanes, the average boy knows much about gas engines, wireless, earth inductors, and fuel and carrying gases. In fact, teachers in the upper elementary grades are now in serious danger of being found wanting by boys of such interests. As this is true, these teachers will be less essential in the lives of such boys. To be one who is able to make kites that will fly, tinker the old car to make it go, set up an aërial that will bring in the wave

messages, construct a boat that has real qualities, and read the dot-and-dash code, means that such a one is acceptable to youth.

To be one who knows simple, industrial processes and to have some skill in one or more processes, whether it be skill in making a fish net, in cooking a meal out of doors, in building a boat of usable size, in building a club house, or a hut in the woods, in making a fireplace that does not smoke, in making a fish weir, in using an ax, hammer, or saw, or in making a doll dress, is to be one who is welcome in the plans of children. To be able to explain some of the marvels of the industrial world means that such a one can interest children.

A teacher should like beauty and its expression. Everything that has embodiment has in it the possibilities of beauty of line, tone, and color. Some do not know how to see beauty. Children may be taught to recognize it. It is in the commonplace things of everyday life. Only one who can, himself, see the purples in the horizon or feel the throb of nature's processes can point them out to a child. Interpretations of the experiences of life are to be found in the storehouses of music, literature, and art. One who would lead children into some of the meanings of experience must be one who knows the resources of poetry, music, and art. To teach children to like poetry, means that the teacher must genuinely enjoy it. To disclose beauty to others means to know and value it one's self.

Growth as an essential characteristic of a teacher. Education is a continuous process of growing. Growing children are ever coming into new, farther-reaching experiences. They are attempting to-day what they could not vision yesterday. Each achievement is revealing new possibilities, and these, in turn, challenge to new effort. One does not look for help from one who is idly sitting by the roadside, nor do growing, live children go for suggestions to one who is indifferent to their engrossing interests. An adult who is sought out by children is one who is active and growing, one who is himself alert to new possibilities, and new endeavors. One who is not growing can scarcely guide growth. Growth engenders growth. Activity stimulates activity.

A teacher, then, must be one of varied interests. She must be active, dynamic. She must be one who is trying to find out, to explore new fields, to gather new meanings, and to see the beauty about her. Because she is living fully she can help boys and girls to live.

The teacher's responsibility for planning her work. The work of guiding activities of children in directions making for desirable growth entails a responsibility for definite planning. The classroom setting, the resources of the environment, the possibilities latent in the individual children — all are factors which the teacher must take into account. The present interests of the children are significant. A good teacher sees in them the varied possibilities which may develop from them.

A teacher, then, must be thinking far ahead of immediate children's interests. In the class proposal of to-day, she must see the different activities to which it may lead. In a given unit of work, she must be able to see the many possible activities to which it may lead, and have some judgment as to relative values in these possibilities. She must be able to recognize a worthy interest in its inception.

This means that before a unit of work is launched by the children, the teacher should have blocked it out in its possibilities. She should see the many activities involved. She should be aware of the knowledges and skills called for. She should know suitable sources for such information and data as will be needed. She should know something of the relative worth of such subject matter. She should consider the availability of materials needed for construction, for illustration, for experimentation, and for reporting and summarizing. She should consider the suitability of the varied aspects of the work for individual members of the group. What challenges has it for their varying aptitudes? What lines of growth will it stimulate?

Written plans. It is believed advisable for teachers to develop the habit of keeping a notebook by way of memorandum of each unit of work attempted. After thinking through the various possibilities of a proposed unit, and after gathering all the pertinent data she can find, she should reduce such ideas and data thus assembled to some organization. This outline of the unit, including its possible activities, its subject

matter, its references, and the illustrative and constructive materials needed, should be placed in this notebook. Such an outline will serve as a check as the work progresses. It will tend to give the teacher aid in judging the relative worth of details as they come up. The teacher needs such a perspective of the whole if she would teach children how to judge worths in learning to guide their activities.

As already suggested in Chapter IV, the recitation is the time when the group comes together to accomplish some things which can better be accomplished together than individually. Such group meeting is for the purpose of furthering the objectives and resultant enterprises of the class. When the group meeting ends, each individual should leave it with a definite understanding of what he is to be responsible for doing before the next meeting. He also should have a clear notion as to the purpose of the next meeting, in order that what he does by way of preparation for it will be most useful in promoting the success of the next meeting.

Of all members of the group the one bearing the greatest responsibility for preparation is the teacher. She must take time to visualize that next meeting, detailing just what she thinks will happen, in the order in which she thinks it will happen. This necessitates her thinking about the individuals in the group. What will their reactions to the group enterprise be? What can they contribute? How can the work be so guided as to give each a chance to profit as he needs in

the next meeting? What skills will be called for? Have the children mastery of them? What facts, what data will be involved? What illustrative material will be useful? What are the children doing by way of preparation for the meeting? What satisfactions will they get in the meeting because of such preparation? What will be accomplished in the meeting? What will emerge that will cause the children to see what they ought to do next?

Use of the plan in teaching. After carefully thinking through the coming meeting and the children's preparation for it, and after gathering information and illustrative material needed, particularly that which may be overlooked by the children, the teacher should carefully organize the result of her efforts into some form of outline which she puts into the notebook. She should put in as much detail as will be helpful to her in doing her part well, and no more.

The nature of the outline will vary according to the character of the unit of work and according to the individuality of the teacher. Such an outline is quite a personal matter. It is written primarily and often only for the teacher herself. No one else should prescribe its form or extent. Such prescription violates individuality in thinking, in studying, in planning.

This detailed preparation does not imply a rigid following of the outline thus made. It is to be used as the class work seems to need it. It is to be of assistance to the teacher as she helps the children in their effort to move ahead in the enterprises they have

undertaken. The value of the work of the period is augmented by wise teacher-guidance of sincere pupil effort.

When the next class meeting is ended, the teacher should take a minute or so to go over this written memorandum, putting checks by those points which were covered, and noting at the bottom any points which came up which she had overlooked in her plans. Similarly, she should make note of new data, illustrations, references, suggestions, or questions proposed by members of the group. She should note what was decided upon as the next step.

Nature and value of the plan. While no set form is advisable as a requirement of every teacher, it is believed that the written notations should include: (*a*) something to indicate the probable procedure seeming good to the teacher; (*b*) such data as may be needed by the teacher to reënforce the teacher's accuracy of memory; and (*c*) a list of references and illustrative materials to be used.

So far as the teacher is concerned, such written preparation for the class meeting as is here suggested will be of assistance to her because:

1. It will cause her to think through the situation in greater detail because she writes the results of thinking.

2. It is available during the class hour for guiding the teacher, should developments arise which would tend to take the work off on a tangent.

3. The practice of checking, already mentioned,

serves in that it becomes a good journal of the class work.

4. It is a good basis for determining ways of noting the progress of the class.

There is an additional value in such writing of the plans. When a teacher wants to discuss her work with a superior officer, observation of this class and teacher at work will be greatly augmented by the opportunity to read this journal of the work. It will show the teacher's ability: (*a*) to look ahead in anticipating children's efforts and contributions, and (*b*) to guide these efforts and suggestions. If all the items in the outlines are checked off, it would indicate that the teacher is autocratic; if none, it would indicate that the teacher is unable to guide the children. The notations at the bottom would be some index of the amount of worthy pupil initiative that prevails in the class.

In all this planning of work with children, the teacher must check her thinking and planning by the application of the laws of learning to the situations planned. Criteria for such checking were given in Chapter IV.

The teacher's need for system in keeping data and materials available. The kind of responsibility in teaching here discussed, implies that the teacher be equipped with ability to assemble data of a varied nature. Not all the material needed in the kind of learning discussed is found in the textbooks of the class. Much material of a more recent nature is involved. Pictures, graphs, newspaper clippings, and

quotations from various books are useful in such work. Magazines and newspapers, government reports, advertising material, and photographs furnish much that is helpful. How is a teacher to have such a miscellany of incidental material always easily available?

There are some library habits which will be helpful. The keeping of a card index of useful references is recommended. The bibliographical methods of libraries should be followed. As new references are found by the teacher, or brought in by the children, cards should be made for them. Clippings, pictures, notes, summaries, and flat illustrative material should be filed in a vertical file of some sort, using the conventional $9\frac{1}{2}'' \times 12''$ folder. Pamphlets of importance should be put in stiff board binders and filed alphabetically in a group.

Such methods of filing data will make the teacher much better able to enrich the work. In addition, children easily imitate the methods of one they respect. Such filing habits thus easily become attractive to children, and make it easy to teach them method in using reference material.

Provision for professional growth. All that has been said about the teacher's work implies the necessity for provision for professional growth. The teacher must find time and opportunity for reading professional books. She must have means of profiting by the recent findings of research workers relative to child life and the learning process. She must, herself, be a student of child life. She must keep in touch with

educational movements. She must have access to professional magazines. She must have some contacts with other teachers, some of whom are able to give her new ideas and wise suggestions. All of this means time, stimulation, and opportunity to grow.

Summary. A teacher is the one vested by society with responsibility to guide the child's growth. To do this wisely she needs to be one interested in some of the phases of the physical world and its processes, the social world and its processes, and the workaday world and its processes, phases of a kind which are appealing to growing children. She must be interested in beauty and art products which give interpretation to life. She must be one who is, herself, growing.

In carrying on the class-work, she must, in advance, plan each big unit of activity sufficiently well to be able to keep a proper perspective of relative values and to be alert for children's leads in worthy directions. She must make careful preparation of her part for each class meeting just as she expects each child to do. A written memorandum of this preparation is valuable. No set form should be imposed.

She should form a habit of keeping a bibliographical card index; of keeping a vertical file of notes, clippings, illustrative and other flat materials; and of keeping valuable pamphlets properly bound and filed.

SUGGESTIONS FOR THOUGHT AND DISCUSSION

1. With what community activities should a teacher be identified?

2. What value is there in the teacher's living in the community with her children?
3. With what industries would you suggest that a teacher be familiar?
4. How would you suggest that a teacher get acquainted with the industries of the community?
5. With what phases of industry should the school work deal?
6. Why is a teacher who likes to hike valuable in a classroom?
7. What history can you teach through the use of the things in the local environment?
8. At the beginning of the school year list the books and questions in which you are vitally interested. Lay this list aside where you will not refer to it. At the close of the school year, again list. Compare the two lists. What do they show as to changes in your interests? Have you grown?
9. Should lessons be planned?
10. Who profits from the planning, the children or the teacher?
11. What is wrong with writing plans a week in advance?
12. Find a class of children engaged in a piece of work. Watch the lesson as being taught. Sometime after this period talk with the teacher about it. Before leaving get from the teacher her ideas as to what will be done at the next lesson. Visit this second lesson. Note the things done that were not expected and also the things expected that were not done. In the conference with the teacher, following the lesson, find out why it varied from her plans. Plan with her for the next lesson. Again, observe and later discuss. Get the teacher's consent to your planning a lesson and watch her teach it. In the conference following find out why the lesson did not go as you planned it.
13. Find out a unit of work which a class contemplates

studying at a future date. Gather all the data you can find upon it. List references in terms of those for teacher and those for children. Gather all the illustrative material you can find. List illustrative materials which you believe children can gather when needed. List all the possible things it may be valuable for the children to do in this study. What materials and equipment will be needed? Can children be depended upon to provide some of these? List the outcomes of the study which you can see possible.

14. What equipment is desirable to enable you to keep ready for immediate use your collection of bibliography, clippings, pictures, maps, graphs, illustrative materials, samples, pamphlets, and books? What inexpensive equipment can you suggest?
15. What information do you need about:

Book companies	Phonograph records
Supply houses	Map publishers
Commercial exhibits	Picture companies
Railroad and steamship guides	Government documents
Public parks	Radio programs
Advertising materials of commercial clubs	Sets of slides
	Summer resort circulars

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